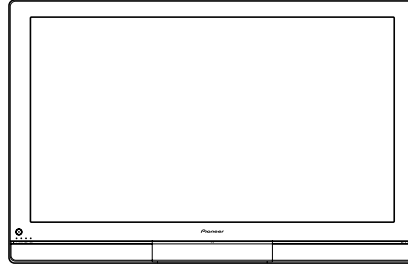


# Service Manual



PDP-436SXE

ORDER NO.  
**ARP3333**

PLASMA DISPLAY SYSTEM

# PDP-436SXE PDP-436RXE

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-436SXE	WYVIXK5	AC220 - 240V	
PDP-436RXE	WYVIXK5	AC220 - 240V	
PDP-436RXE	WYVI5	AC220 - 240V	




For details, refer to "Important Check Points for good servicing".

# SAFETY INFORMATION



**This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.**

**Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.**



## WARNING

**This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.**

Health & Safety Code Section 25249.6 - Proposition 65



## NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols  (fast operating fuse) and/or  (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

## REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible  (fusible de type rapide) et/ou  (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

## SAFETY PRECAUTIONS

**NOTICE :** Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and servicetechnician.

6. Perform the following precautions against unwanted radiation and rise in internal temperature.
  - Always return the internal wiring to the original styling.
  - Attach parts (Gasket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.
7. Perform the following precautions for the PDP panel.
  - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
  - Make sure that the panel vent does not break. (Check that the cover is attached.)
  - Handle the FPC connected to the panel carefully. Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
8. Pay attention to the following.
  - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

### Leakage Current Cold Check

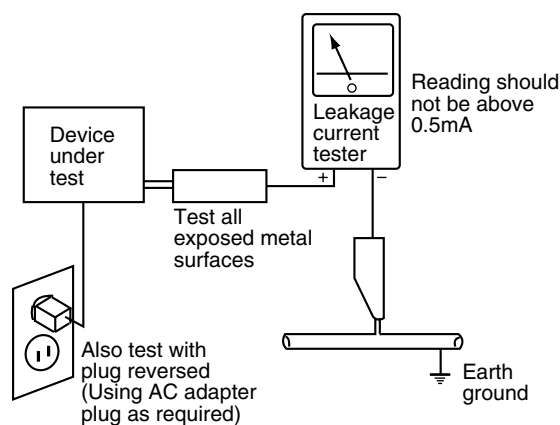
With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of  $0.3M\Omega$  and a maximum resistor reading of  $5M\Omega$ . Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

### Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).

Turn the AC power switch on.

Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.



AC Leakage Test

**ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.**

### PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a  $\Delta$  on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

A

### ■Charged Section

The places where the commercial AC power is used without passing through the power supply transformer.

If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

B

1. Power Cord
2. AC Inlet
3. Power Switch (S1)
4. Fuse (In the POWER SUPPLY Unit)
5. STB Transformer and Converter Transformer (In the POWER SUPPLY Unit)
6. Other primary side of the POWER SUPPLY Unit

### ■High Voltage Generating Point

The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

If the procedures described in “7.1.4 POWER ON/OFF FUNCTION FOR THE LARGE-SIGNAL SYSTEM” are performed before the power is turned off, the voltage will be discharged in about 30 seconds.

1. POWER SUPPLY Unit.....(203V)
2. 43 X DRIVE Assy ..... (–180V to 203V)
3. 43 Y DRIVE Assy ..... (500V)
4. 43 SCAN A Assy ..... (500V)
5. 43 SCAN B Assy ..... (500V)
6. SUS CLAMP 1 Assy .....(–180V to 203V)
7. SUS CLAMP 2 Assy .....(–180V to 203V)

C

■ : Part is Charged Section.

■ : Part is the High Voltage Generating Points other than the Charged Section.

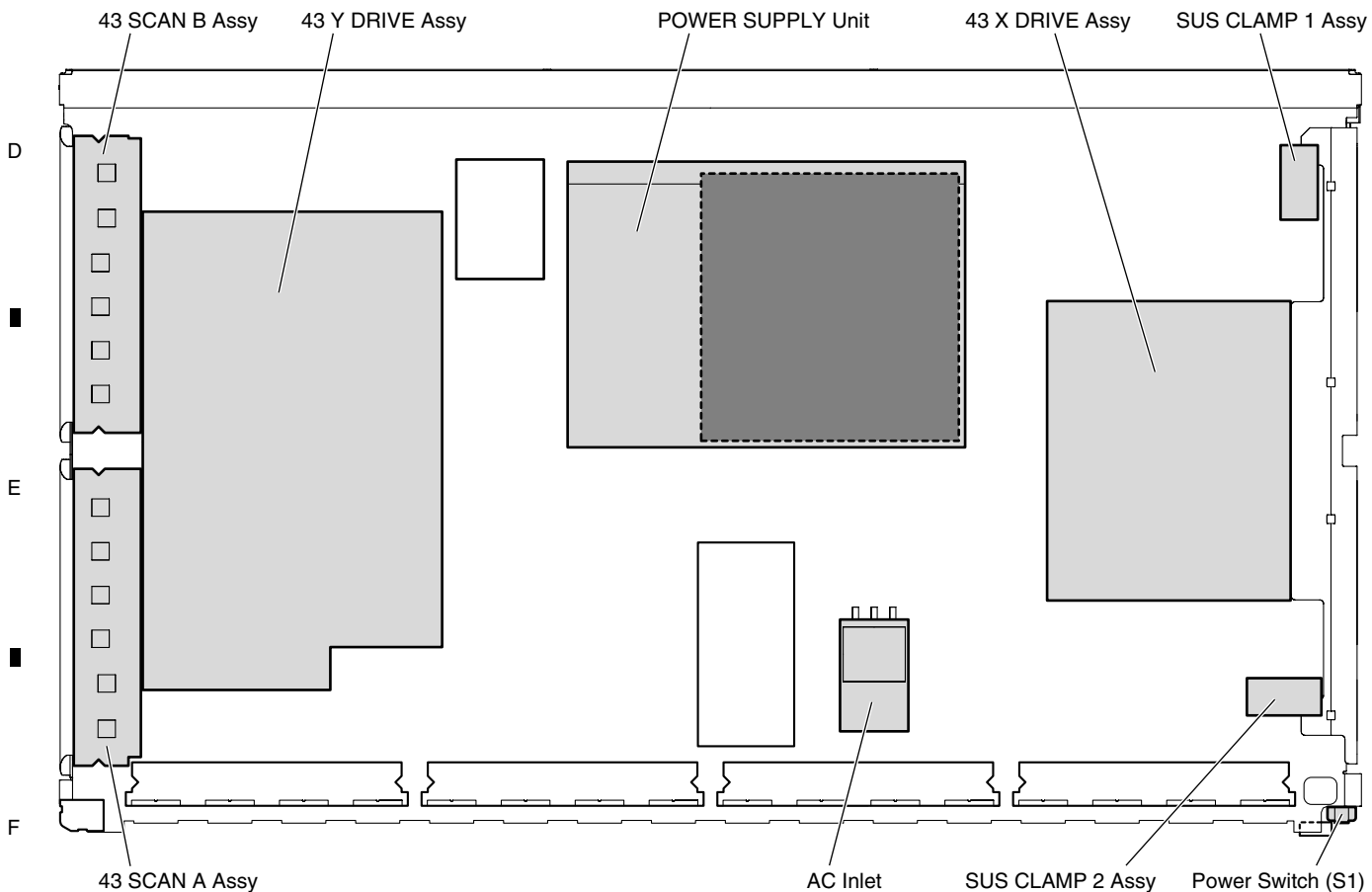


Fig.1 Charged Section and High Voltage Generating Point (Rear View)



## [Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol. Please be sure to confirm and follow these procedures.

### 1. Product safety



Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

- ① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

- ② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification (addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

- ③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris. Soldering should be finished with the proper quantity. (Refer to the example)

- ④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

- ⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

- ⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs. In addition, be sure that there are no pinched wires, etc.

- ⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

- ⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages. If you find a damaged power cord, please exchange it with a suitable one.

- ⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

- ⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries. Please pay attention to your surroundings and repair safely.

### 2. Adjustments



To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification. Adjustments should be performed in accordance with the procedures/instructions described in this manual.

### 3. Lubricants, Glues, and Replacement parts



Use grease and adhesives that are equal to the specified substance. Make sure the proper amount is applied.

### 4. Cleaning



For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

### 5. Shipping mode and Shipping screws



To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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# 1. SPECIFICATIONS

Item			43" Plasma Display, Model: PDP-436SXE/PDP-436RXE	
Number of Pixels			1024 x 768 pixels	
Audio Amplifier			13 W + 13 W (1 kHz, 10 %, 8 Ω)	
Speakers			Bass-reflex type (two-way system)	
Surround System			SRS/FOCUS/TruBass	
Power Requirement			220–240 V AC, 50/60 Hz, 291 W : SXE / 287 W : RXE (0.8 W Standby : SXE / 0.4 W Standby : RXE)	
Dimensions			1076 (W) X 696 (H) X 116 (D) mm	
Weight			31.8 kg (70.1 lbs.) (SXE), 31.2 kg (68.8 lbs.) (RXE)	
Colour System		Analogue	PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60	
		Digital (*)	PAL/SECAM	
TV Function (Analogue)	Receiving System		B/G, D/K, I, L/L'	
	Tuner	VHF/UHF	E2–E69ch, F2–F10ch, I21–I69ch, IR A–IR Jch	
		CATV	Hyper-band, S1–S41ch	
	Auto Channel Preset		99 ch, Auto Preset, Auto Label, Auto Sort	
	STEREO		NICAM/A2	
TV Function (Digital)	Receiving System (*)		DVB-T (2K/8K COFDM)	
	Tuner (*)	VHF/UHF	VHF Band III (170 to 230 MHz) and UHF Band IV, V (470 to 862 MHz)	
	Auto Channel Preset (*)		999 ch, Auto Preset, Auto Label, Auto Sort	
	STEREO (*)		MPEG layer I/II, Dolby Digital	
Terminals	Rear	INPUT 1	SCART (AV in, RGB in, TV out)	
		INPUT 2	SCART (AV in/out, S-VIDEO in, AV link *1), Component Video in	
		INPUT 3	SCART (AV in/out, S-VIDEO in, RGB in, AV link *1), HDMI in*2	
		Antenna	75 Ω Din Type for VHF/UHF in (Analogue)	
			75 Ω Din Type for VHF/UHF in (Digital) (*)	
			75 Ω Din Type for VHF/UHF out (Digital) (*)	
	Front	INPUT 4	S-VIDEO,AV in	
AUDIO OUTPUT Terminal		(Rear)	AUDIO out (Fixed)	
DIGITAL OUT Terminal (*)			Digital audio output (Optical)	
COMMON INTERFACE (*)		(Rear)	CA Module	


\*1 Switchable (\*) : 436SXE Model only

\*2 This conforms to HDMI1.1 and HDCP1.1.

HDMI (High Definition Multimedia Interface) is a digital interface that handles both video and audio using a single cable.  
HDCP (High-bandwidth Digital Content Protection) is a technology used to protect copyrighted digital contents that use the Digital Visual Interface (DVI).

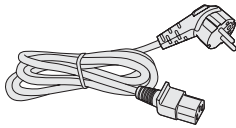
- Design and specifications are subject to change without notice.

## Trademarks

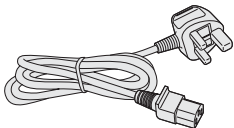
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A ■ Accessories

Power cord (2 m)

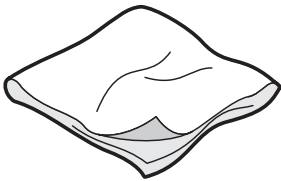


(ADG1214)  
(For Europe, except UK and Eire)



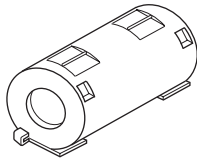
(ADG1223)  
(For UK and Eire)

Only the power cord that is appropriate in your country or region is supplied.



Cleaning cloth  
(AED1285)

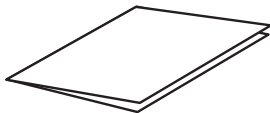
(ATX1039)



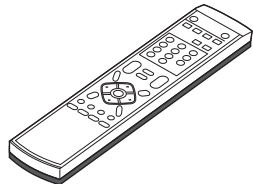
Ferrite core



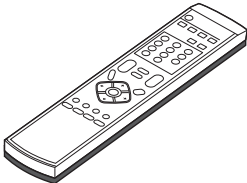
Cable tie  
(for Ferrite core)



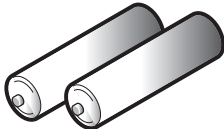
Warranty card



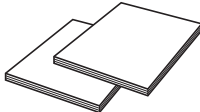
Remote control unit  
(SXE : AXD1515)



Remote control unit  
(RXE : AXD1516)



AA size battery x 2



Two operating instructions

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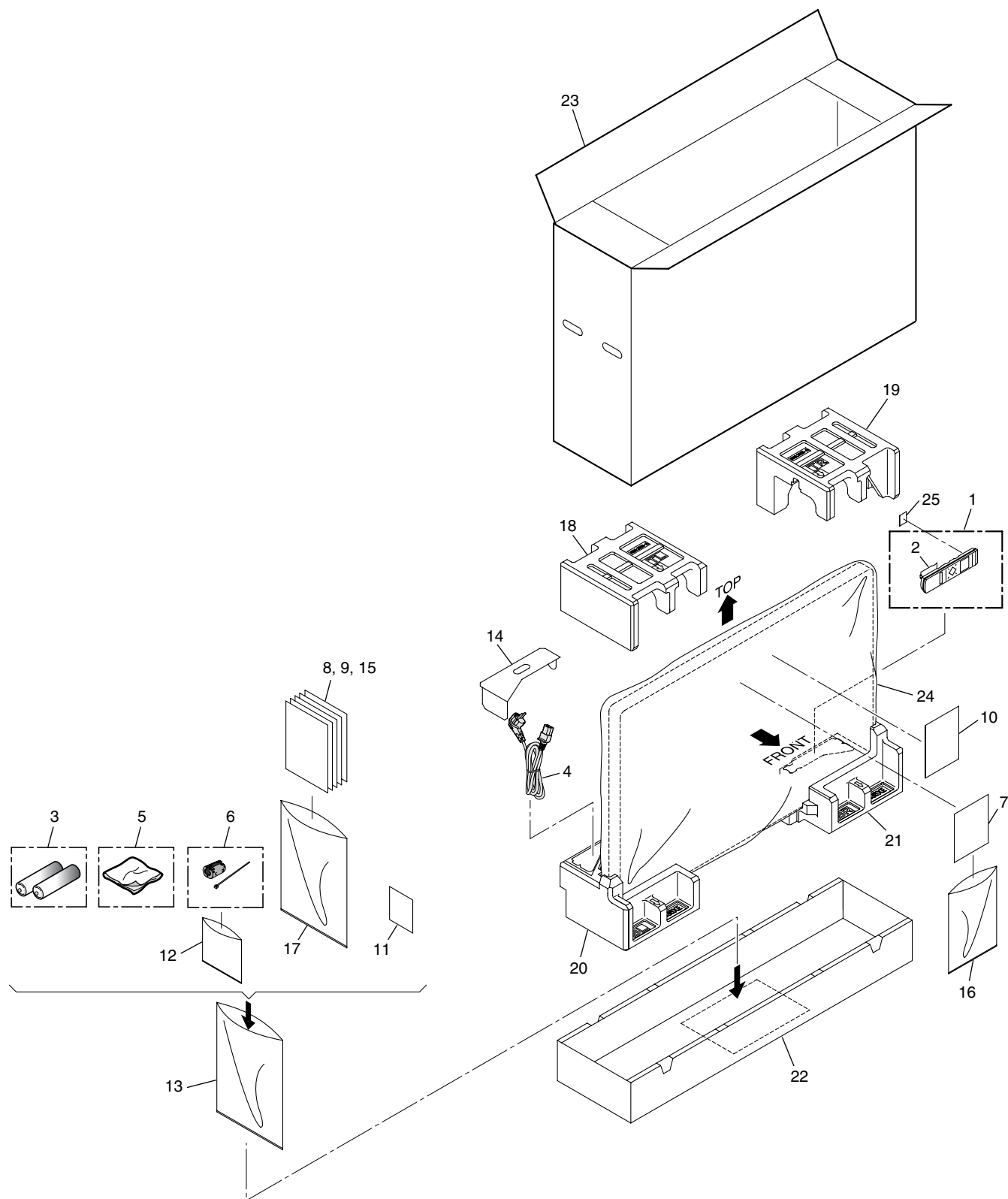
PDP-436SXE

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## 2. EXPLODED VIEWS AND PARTS LIST

- NOTES:
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
  - The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
  - Screws adjacent to ▼ mark on product are used for disassembly.
  - For the applying amount of lubricants or glue, follow the instructions in this manual.  
(In the case of no amount instructions, apply as you think it appropriate.)

### 2.1 PACKING SECTION



## (1) PACKING PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Remote Control Unit	See Contrast table (2)	15	Block Diagram	See Contrast table (2)
2	Battery Cover	AZA7424	16	Polyethylene Bag	See Contrast table (2)
NSP 3	Dry Cell Battery (R6P, AA)	VEM1031	NSP 17	Vinyl Bag	AHG1340
⚠ 4	Power Cord (2 m)	ADG1214	18	Pad (T-L)	See Contrast table (2)
5	Cleaning cloth	AED1285	19	Pad (T-R)	See Contrast table (2)
⚠ 6	Ferrite Core	ATX1039	20	Pad (B-L)	See Contrast table (2)
NSP 7	Warranty	ARY1114	21	Pad (B-R)	See Contrast table (2)
8	Operating Instructions (Italian, Spanish, Dutch)	See Contrast table (2)	22	Under Carton	See Contrast table (2)
9	Operating Instructions (English, French, German)	See Contrast table (2)	23	Upper Carton	See Contrast table (2)
10	Caution Card	ARM1232	24	Mirror Mat	See Contrast table (2)
11	Cleaning Caution	ARM1283	25	WEEE Label	AAX3271
12	Vinyl Bag	AHG1337			
13	Air Cap Bag	AHG1367			
14	Power Cord Case	See Contrast table (2)			

## (2) CONTRAST TABLE

PDP-436SXE/WYVIXK5, PDP-436RXE/WYVIXK5 and WYVI5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-436SXE /WYVIXK5	PDP-436RXE /WYVIXK5	PDP-436RXE /WYVI5
NSP	1	Remote Control Unit	AXD1515	AXD1516	AXD1516
	8	Operating Instructions (Italian, Spanish, Dutch)	ARC1553	ARC1552	ARC1551
	9	Operating Instructions (English, French, German)	ARE1407	ARE1406	ARE1405
	14	Power Cord Case	AHC1076	AHC1076	AHC1075
	15	Block Diagram	ARY1183	ARY1183	Not used
	16	Polyethylene Bag	AHG1326	AHG1326	Not used
	16	Vinyl Bag	Not used	Not used	AHG1340
	18	Pad (436XE T-L)	AHA2524	AHA2524	Not used
	18	Pad (436SX T-L)	Not used	Not used	AHA2467
	19	Pad (436XE T-R)	AHA2525	AHA2525	Not used
	19	Pad (436SX T-R)	Not used	Not used	AHA2468
	20	Pad (436XE B-L)	AHA2526	AHA2526	Not used
	20	Pad (436SX B-L)	Not used	Not used	AHA2469
	21	Pad (436XE B-R)	AHA2527	AHA2527	Not used
	21	Pad (436SX B-R)	Not used	Not used	AHA2470
	22	Under Carton (436XE)	AHD3454	AHD3454	Not used
	22	Under Carton (436)	Not used	Not used	AHD3346
	23	Upper Carton (436SXE)	AHD3445	Not used	Not used
	23	Upper Carton (436RXE)	Not used	AHD3444	AHD3467
	24	Mirror Mat	AHG1327	AHG1327	AHG1284

## 2.2 REAR SECTION

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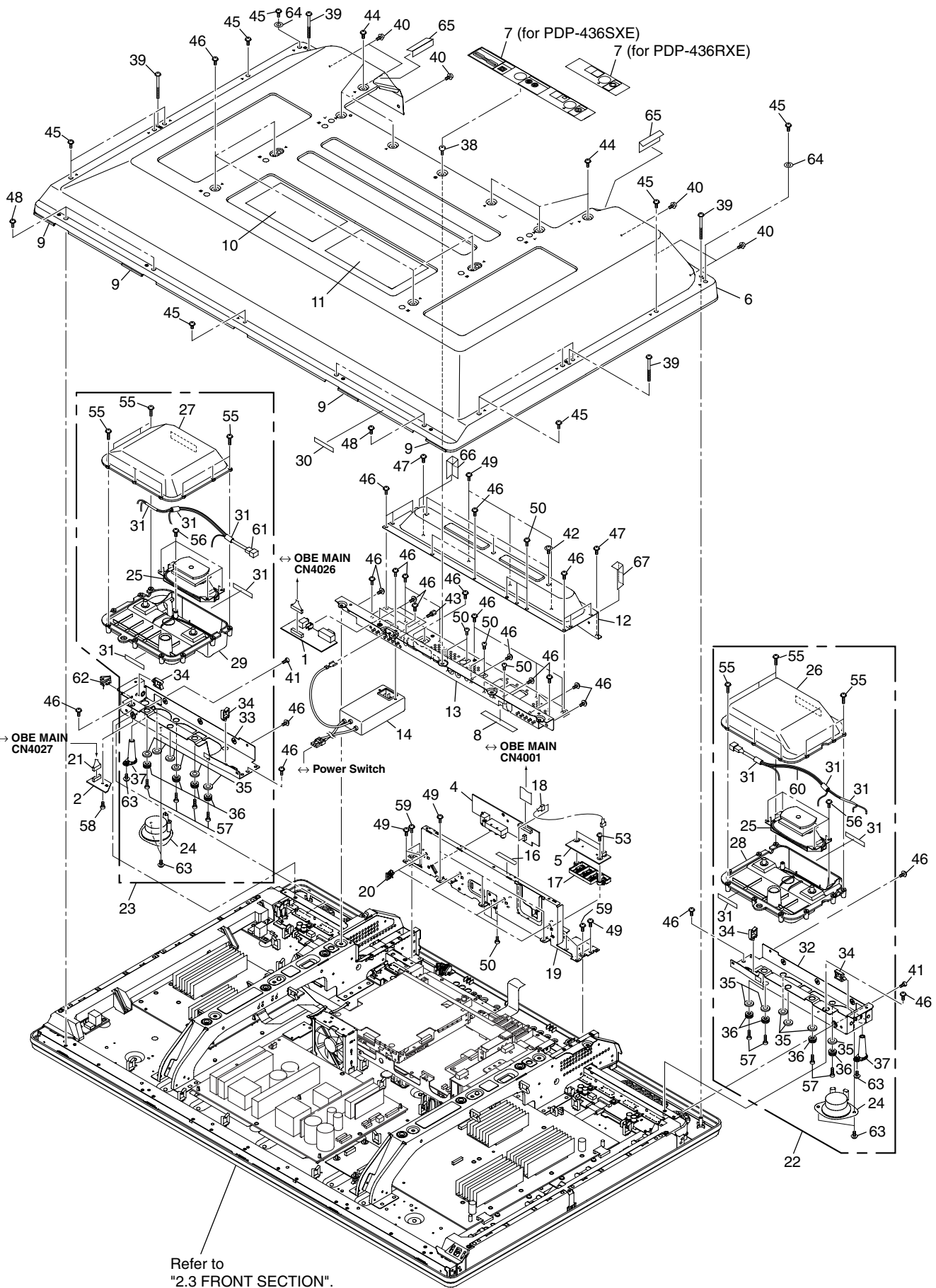
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PDP-436SXE



## (1) REAR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	SR Assy	AWW1088	NSP 35	Insulation Bush	.....
2	LED Assy	AWW1091			
3	.....		NSP 36	Insulation Spacer	.....
4	FRONT Assy	AWW1090	NSP 37	Spacer	.....
5	KEY Assy	AWW1093	38	Screw	ABA1341
			39	Screw (3 x 40P)	ABA1332
6	Rear Case (436SX)	ANE1648	40	Hex Head Screw	ABA1345
7	Terminal Label	See Contrast table (2)			
8	Cushion	AED1288	41	Screw	ABA1338
9	Rear Case Cushion	AEB1439	42	Screw	ABA1340
10	Bolt Caution Label	See Contrast table (2)	43	Hexagon Screw	BBA1051
			44	Screw	AMZ30P060FTB
NSP 11	Name Label	See Contrast table (2)	45	Screw	TBZ40P080FTB
12	Under Cover (436SX)	ANE1649			
13	Terminal Panel E	See Contrast table (2)	46	Screw	AMZ30P060FTB
14	AC Inlet (CN1)	AKP1275	47	Screw	ABZ30P080FTB
15	.....		48	Screw	BBZ40P180FTB
			49	Screw	APZ30P100FTB
16	FFC Cushion	AEB1442	50	Screw	BPZ30P080FTB
17	Control Button (SX)	AAC1556			
18	4P Housing Wire (J126)	ADX3206	51	.....	
19	Front Shield Chassis	ANK1816	52	.....	
20	Wire Saddle	AEC2031	53	Screw	BBB30P120FNI
			54	.....	
21	8P Housing Wire (J127)	ADX3207	NSP 55	Screw	.....
22	Speaker Box Assy L	AMW1006			
23	Speaker Box Assy R	AMW1007	NSP 56	Screw	.....
NSP 24	Speaker (Tweeter)	.....	NSP 57	Screw	.....
NSP 25	Speaker (Woofer)	.....	58	Screw	AMZ30P080FTC
			59	Screw	ABA1322
NSP 26	Speaker Box L	.....	NSP 60	4P Housing Wire (J201)	.....
NSP 27	Speaker Box R	.....			
NSP 28	Speaker Buffle L	.....	NSP 61	4P Housing Wire (J101)	.....
NSP 29	Speaker Buffle R	.....	62	Locking Wire Saddle	AEC1948
NSP 30	Serial Sheet	AAX3143	NSP 63	Screw	.....
			64	Washer	WC40FTB
NSP 31	Cushion	.....	65	Protect sheet C	AED1300
NSP 32	Speaker Stay L	.....			
NSP 33	Speaker Stay R	.....	66	Protect sheet B	AED1299
NSP 34	Wire Saddle	.....	67	Protect sheet A	AED1298

## (2) CONTRAST TABLE

PDP-436SX/WEVIXK5, PDP-436RXE/WEVIXK5 and WEVVI5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-436SX/WEVIXK5	PDP-436RXE/WEVIXK5	PDP-436RXE/WEVVI5
	7	Terminal Label (SX)	AAX3241	Not used	Not used
	7	Terminal Label (RX)	Not used	AAL3240	AAL3242
	10	Bolt Caution Label XE	AAX3243	AAX3243	AAX3244
NSP	11	Name Label (436SX)	AAL2724	Not used	Not used
NSP	11	Name Label (436RX)	Not used	AAL2723	AAL2725
	13	Terminal Panel E SX	ANC2385	Not used	Not used
	13	Terminal Panel E RX	Not used	ANC2384	ANC2384

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# 2.3 FRONT SECTION

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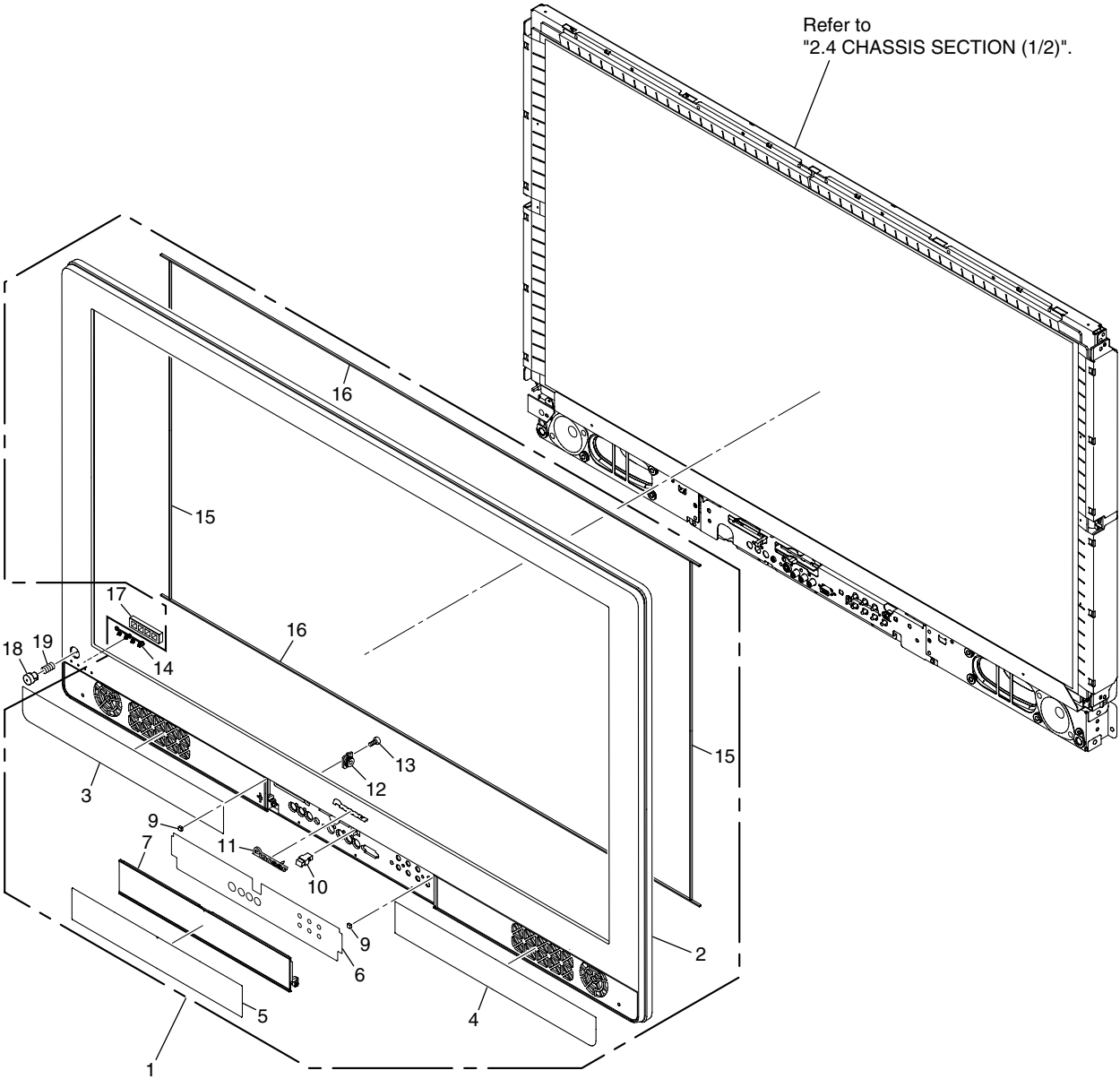
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## (1) FRONT SECTION PARTS LIST

Mark No.	Description	Part No.
1	Front Case Assy 43	See Contrast table (2)
NSP 2	Front Case (436SX)	AMB2875
3	Punching Sheet (L)	See Contrast table (2)
4	Punching Sheet (R)	See Contrast table (2)
5	Punching Sheet E (door)	AAS1008
6	Front Terminal Sheet E	AAK2875
7	Door	AAN1485
8	•••••	
9	Door Cushion	AED1268
10	Catcher	AEC2040
11	Pioneer Badge	AAM1096
12	Gear Damper	AXA1020
13	Screw	APZ30P100FTB
NSP 14	LED Lens	AAK2848
15	Panel Cushin V (43)	AED1256
16	Panel Cushin H (43)	AED1286
17	Blind Cushion (436SX)	AEB1420
18	Power Button	AAD4133
19	Coil Spring	ABH1120

## (2) CONTRAST TABLE

PDP-436SXE/WYVIXK5, PDP-436RXE/WYVIXK5 and WYVI5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-436SXE /WYVIXK5	PDP-436RXE /WYVIXK5	PDP-436RXE /WYVI5
	1	Front Case Assy 43SXE	AMB2892	Not used	Not used
	1	Front Case Assy 43RXE	Not used	AMB2891	AMB2891
	3	Punching Sheet SXE (L)	AAS1013	Not used	Not used
	3	Punching Sheet E (L)	Not used	AAS1005	AAS1005
	4	Punching Sheet SXE (R)	AAS1007	Not used	Not used
	4	Punching Sheet RXE (R)	Not used	AAS1006	AAS1006

## 2.4 CHASSIS SECTION (1/2)

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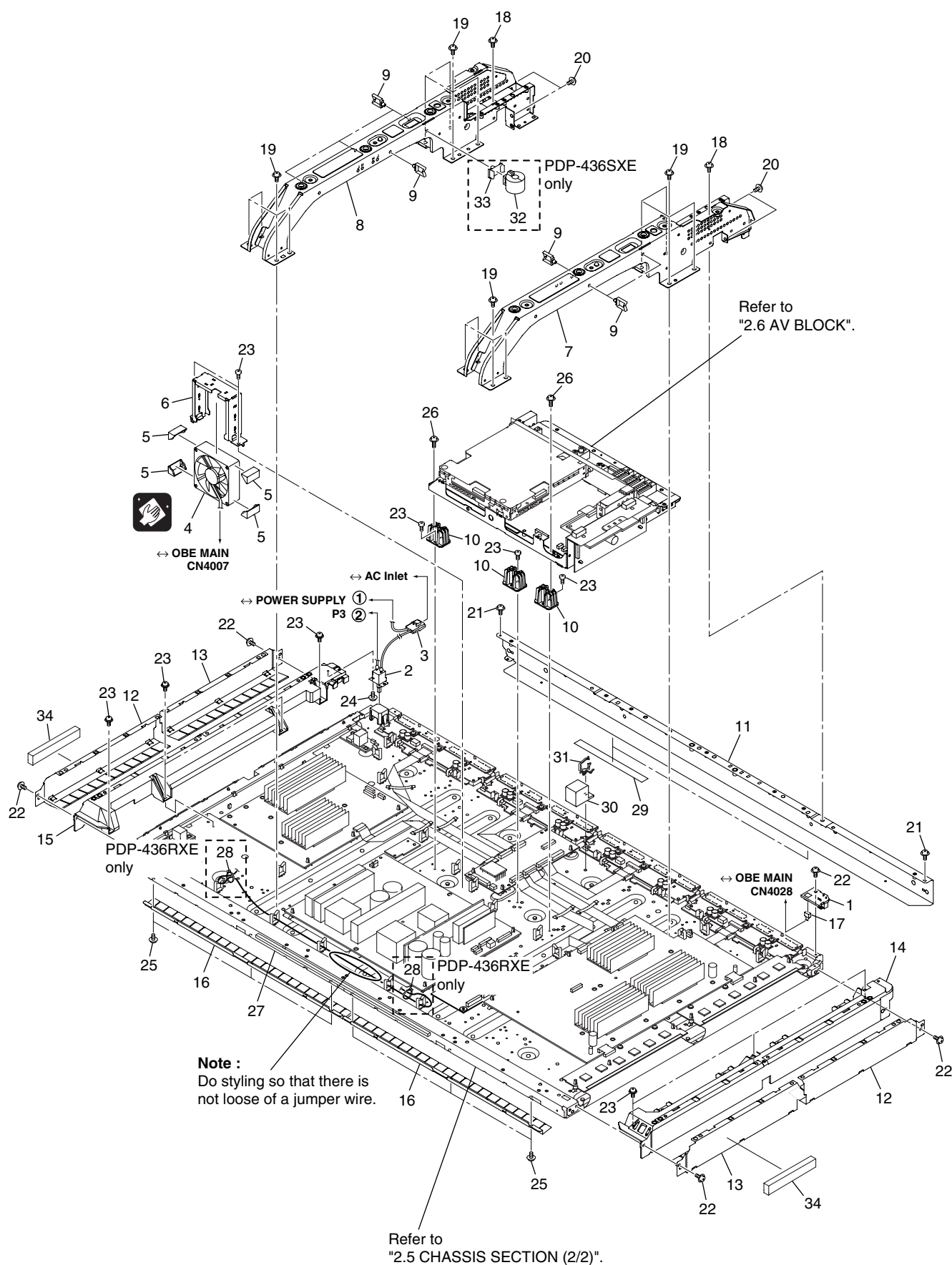
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## (1) CHASSIS SECTION (1/2) PARTS LIST

Mark	No.	Description	Part No.	
	1	IR Assy	AWW1092	
⚠	2	Power Switch (S1)	ASG1092	A
	3	Power Housing Wire (43)(J103)	ADX3291	
⚠	4	Fan Motor 80 x 25L	AXM1052	
	5	Floating Rubber 80	AEB1427	
	6	Fan Holder	ANG2833	
	7	Sub Frame L Assy 436SX	ANA1889	
	8	Sub Frame R Assy 436SX	ANA1890	
	9	Wire Saddle	AEC1745	
	10	Chassis Support	AMR3475	
	11	Front Chassis H Assy 436SX	ANA1924	B
	12	Panel Holder V1 (43)	ANG2773	
	13	Panel Holder V2 (43)	ANG2774	
	14	Front Chassis VL (436SX)	AMA1018	
	15	Front Chassis VR (436SX)	AMA1019	
	16	Panel Holder H (43)	ANG2772	
	17	3P Housing Wire (J124)	ADX3204	
	18	Screw	ABA1341	
	19	Screw	TBZ40P080FTB	
	20	Screw	AMZ30P060FTB	C
	21	Screw	APZ30P080FTB	
	22	Screw	ABZ30P080FTC	
	23	Screw	VBB30P080FNI	
	24	Screw	BPZ30P080FTB	
	25	Screw	BBZ30P060FTC	
	26	Screw	APZ30P100FTB	
	27	Waterproof Cushion	AEB1424	
	28	Binder	See Contrast table (2)	
	29	Insulation Sheet	AED1289	
⚠	30	Gasket AV	ANK1817	D
	31	Re-use Clamp	AEC2083	
	32	Ferrite Core	See Contrast table (2)	
	33	Ferrite Core Holder	See Contrast table (2)	
	34	Cushion	See Contrast table (2)	

## (2) CONTRAST TABLE

PDP-436SXE/WYVIXK5, PDP-436RXE/WYVIXK5 and WYVI5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-436SXE /WYVIXK5	PDP-436RXE /WYVIXK5	PDP-436RXE /WYVI5
	28	Binder	Not used	AEC-093	AEC-093
	32	Ferrite Core	ATX1060	Not used	Not used
	33	Ferrite Core Holder	AEC1818	Not used	Not used
	34	Cushion	Not used	Not used	AEB1441

# 2.5 CHASSIS SECTION (2/2)

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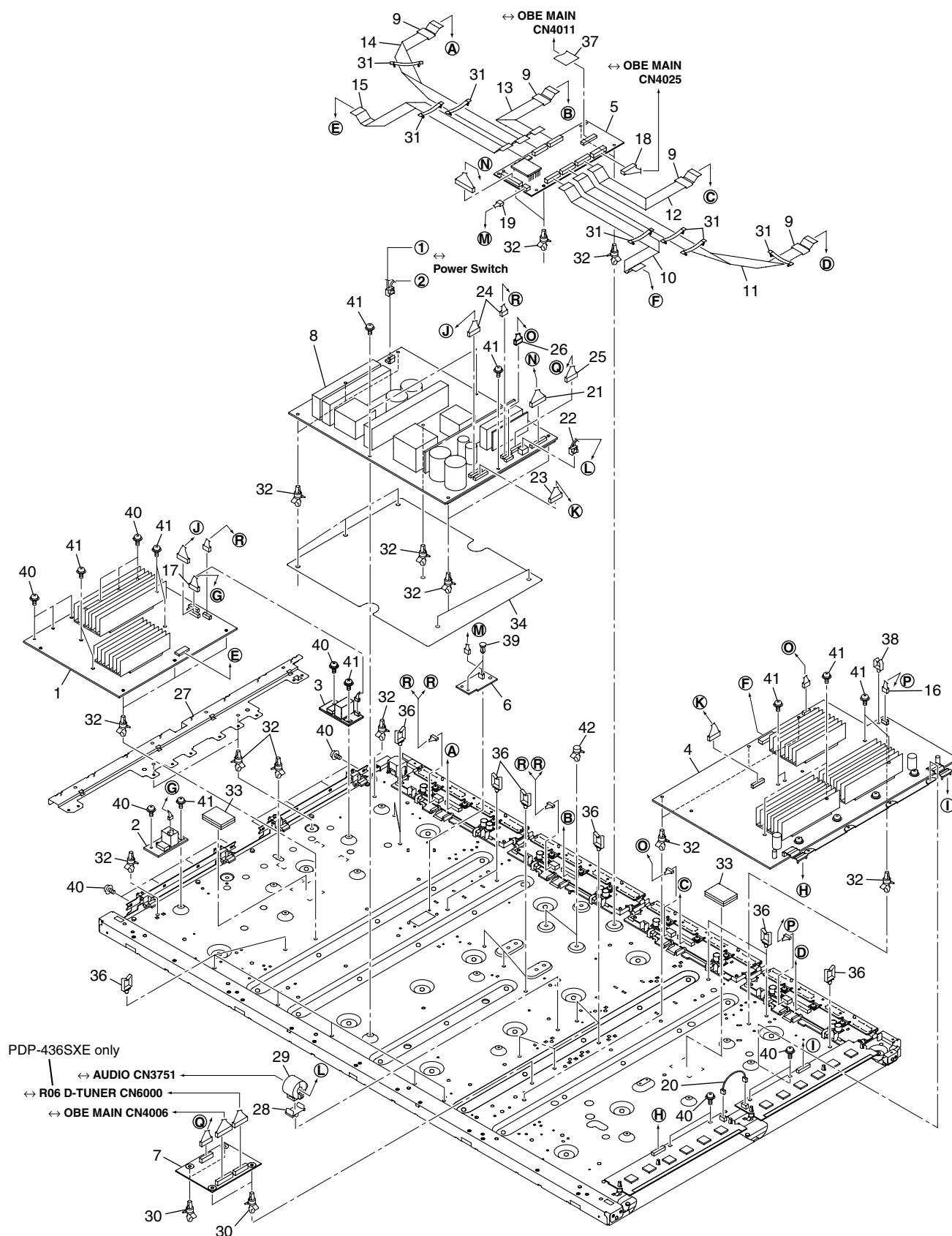
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# CHASSIS SECTION (2/2) PARTS LIST

Mark	No.	Description	Part No.	
	1	43 X DRIVE Assy	AWW1074	
	2	SUS CLAMP 1 Assy	AWW1022	A
	3	SUS CLAMP 2 Assy	AWW1023	
	4	43 Y DRIVE Assy	AWV2256	
	5	OB DIGITAL Assy	AWV2244	
	6	PANEL SENSOR Assy	AWW1094	
	7	SUB POWER Assy	AWW1095	■
⚠	8	POWER SUPPLY Unit	AXY1133	
	9	Ferrite Core	ATX1048	
	10	Flexible Cable (J201)	ADD1299	
	11	Flexible Cable (J202)	ADD1300	B
	12	Flexible Cable (J203)	ADD1301	
	13	Flexible Cable (J204)	ADD1302	
	14	Flexible Cable (J205)	ADD1303	
	15	Flexible Cable (J206)	ADD1304	
	16	4P Housing Wire (J108)	ADX3131	■
	17	6P Housing Wire (J121)	ADX3201	
	18	8P Housing Wire (J128)	ADX3208	
	19	3P Housing Wire (J123)	ADX3203	
	20	3P Housing Wire (J113)	ADX3136	C
	21	14P Housing Wire(J122)	ADX3202	
	22	3P Housing Wire (J125)	ADX3205	
	23	9P Housing Wire (J101)	ADX3124	
	24	Housing Wire (J120)	ADX3290	
	25	10P Housing Wire (J133)	ADX3214	■
	26	6P Housing Wire (J107)	ADX3130	
	27	Conductive Plate XA	ANG2776	
	28	Ferrite Core Holder	AEC1818	
	29	Ferrite Core	ATX1044	D
	30	Circuit Board Spacer	AEC2047	
	31	Flat Clamp	AEC1879	
	32	PCB Spacer	AEC1941	
	33	Drive Silicone Sheet	AEH1095	
	34	Power Sheet	AMR3447	■
	35	.....		
	36	Wire Saddle	AEC1745	
	37	FPC (50P) 180 mm	ADY1102	
	38	Mini Clamp	AEC1971	E
	39	Nyron Rivet	AEC1671	
	40	Screw	PMB30P060FTC	
	41	Screw	VBB30P080FNI	
	42	PCB Support	AEC1938	■

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# 2.6 AV BLOCK SECTION

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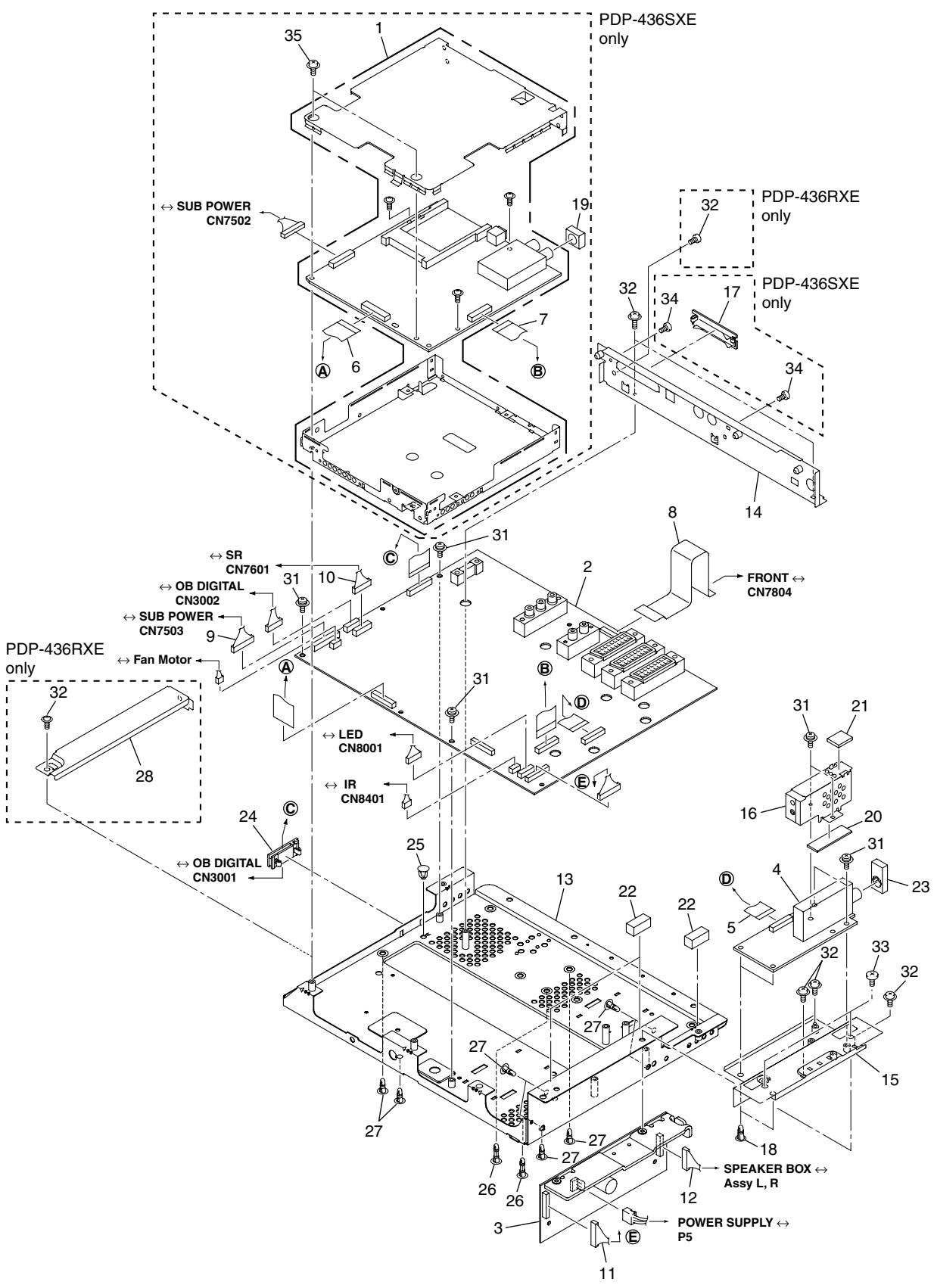
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## (1) AV BLOCK PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	R06 D-TUNER Assy	See Contrast table (2)	21	Gasket B	ANK1812
2	OBE MAIN Assy	See Contrast table (2)	22	Gasket C	ANK1813
3	AUDIO Assy	AWW1087	⚠ 23	Gasket XE	ANK1818
4	TUNER Assy	AWW1089	24	Clamp	AEC1884
5	Flexible Cable (J208)	ADD1340	25	Card Spacer	AEC1957
6	Flexible Cable (J210)	See Contrast table (2)	26	Locking Card Spacer	AEC1801
7	Flexible Cable (J211)	See Contrast table (2)	27	Locking Card Spacer	AEC2019
8	Flexible Cable (J212)	ADD1337	28	Terminal Support	See Contrast table (2)
9	12/16P Housing Wire (J129)	See Contrast table (2)	29	•••••	
10	9P Housing Wire (J130)	ADX3261	30	•••••	
11	13P Housing Wire (J131)	ADX3211	31	Screw	PMB30P080FNI
12	8P Housing Wire (J132)	ADX3212	32	Screw	AMZ30P060FTB
13	AV Base Chassis E	ANA1902	33	Screw	See Contrast table (2)
14	Tuner Prop E	AND1194	34	Screw	See Contrast table (2)
15	Frontend Base	ANG2868	35	Screw	See Contrast table (2)
16	Frontend Shield	ANG2935			
17	Rear Cover	See Contrast table (2)			
18	Spacer	AEC1256			
⚠ 19	Gasket N	See Contrast table (2)			
20	Gasket A	ANK1811			

## (2) CONTRAST TABLE

PDP-436SXE/WYVIXK5, PDP-436RXE/WYVIXK5 and WYVI5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-436SXE /WYVIXK5	PDP-436RXE /WYVIXK5	PDP-436RXE /WYVI5
⚠	1	R06 D-TUNER Assy	AWE1304	Not used	Not used
	2	OBE MAIN Assy	AWV2238	AWV2239	AWV2239
	6	Flexible Cable (J210)	ADD1335	Not used	Not used
	7	Flexible Cable (J211)	ADD1341	Not used	Not used
	9	12P/16P Housing Wire (J129)	ADX3277	Not used	Not used
	9	16P Housing Wire (J129)	Not used	ADX3260	ADX3260
	17	Rear Cover	AMR3425	Not used	Not used
	19	Gasket N	ANK1776	Not used	Not used
	28	Terminal Support	Not used	ANG2869	ANG2869
	33	Screw	ABA1341	ABA1341	ABA1335
	34	Screw	BBZ30P060FTB	Not used	Not used
	35	Screw	AMZ30P080FTC	Not used	Not used

## 2.7 PDP SERVICE ASSY 436P (AWU1135)

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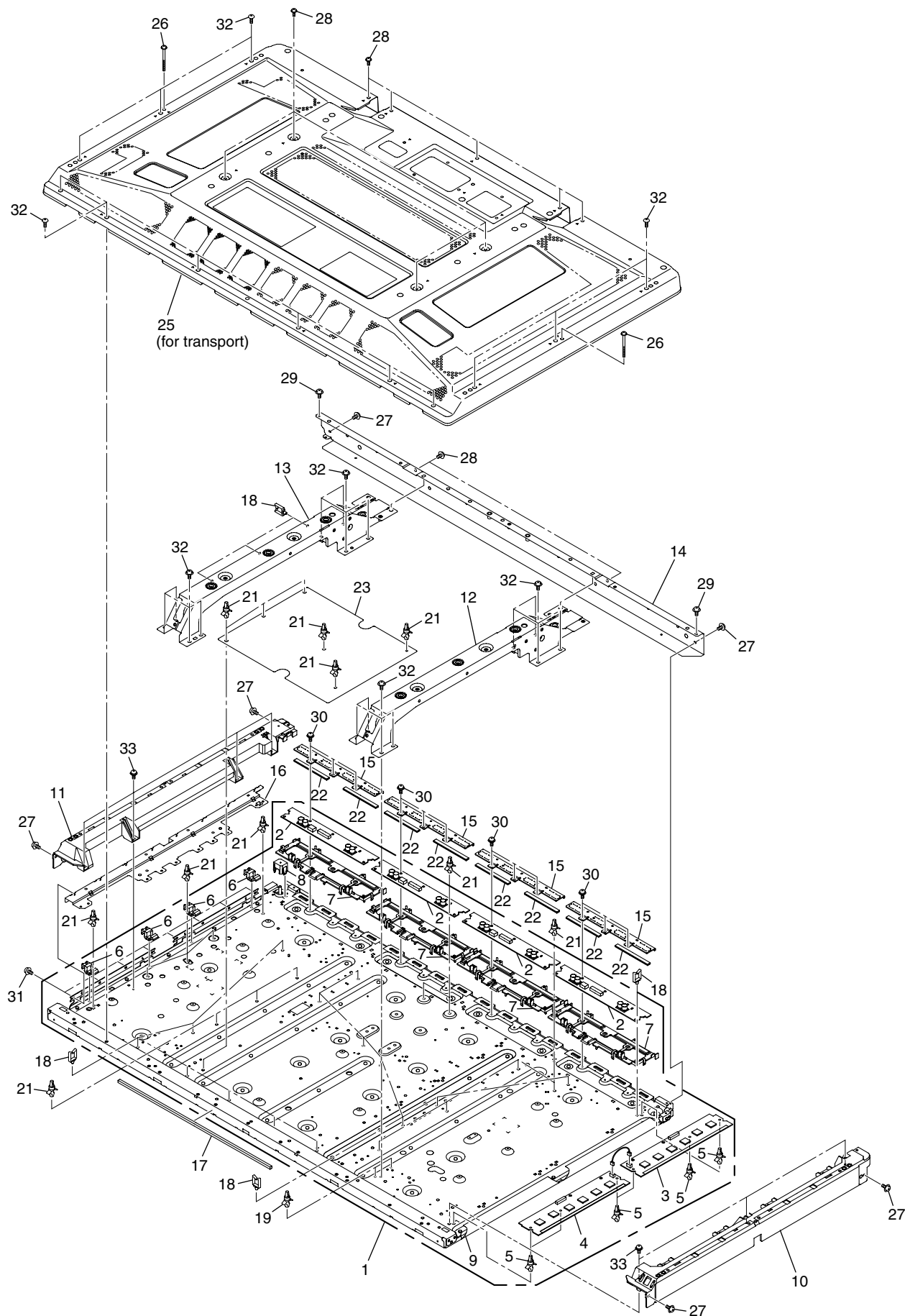
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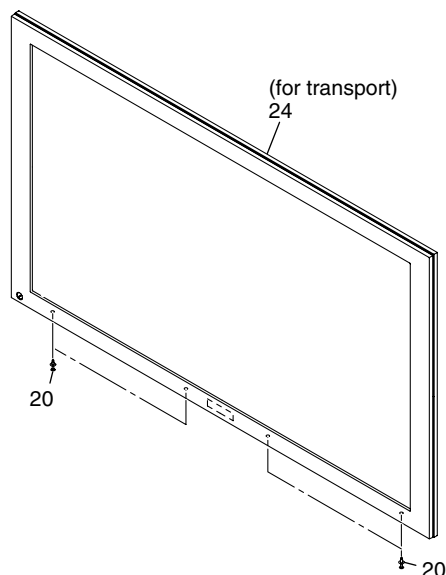
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## • Front Section



### Note when replacing with the PDP Service Assy 436P

This Assy is supplied with common use product. Because the following components do not use it with this unit, detach it, and please use it.

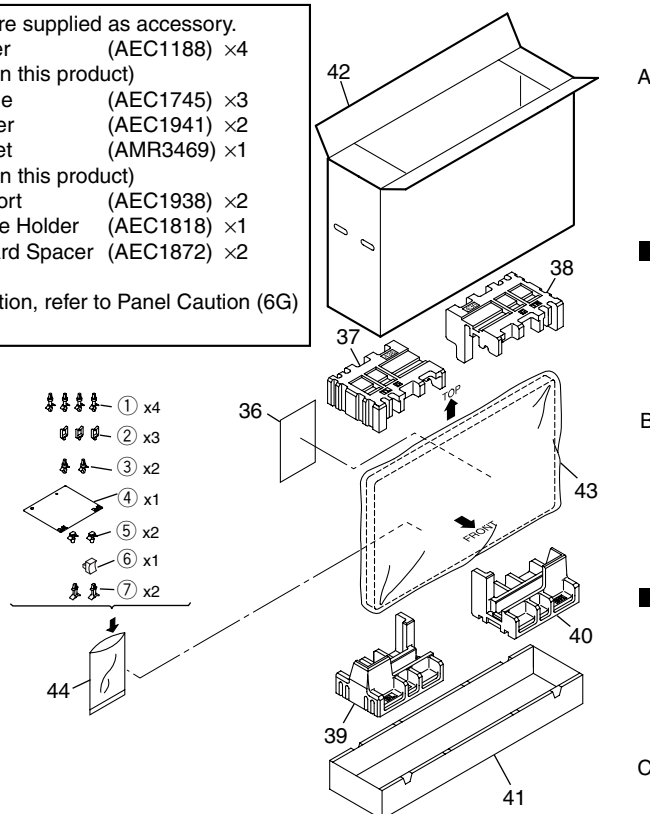
- Front Chassis H Assy (43)(ANA1884)
- Front Chassis VL (43) (AMA1016)
- Front Chassis VR (43) (AMA1017)
- Sub Frame L Assy (436) (ANA1864)
- Sub Frame R Assy (436) (ANA1865)

## • Packing Section

Some parts are supplied as accessory.

- ① PCB spacer (AEC1188) ×4  
(Not used in this product)
- ② Wire Saddle (AEC1745) ×3
- ③ PCB Spacer (AEC1941) ×2
- ④ Audio Sheet (AMR3469) ×1  
(Not used in this product)
- ⑤ PCB Support (AEC1938) ×2
- ⑥ Ferrite Core Holder (AEC1818) ×1
- ⑦ Circuit Board Spacer (AEC1872) ×2

About installation, refer to Panel Caution (6G) (ARM1287).



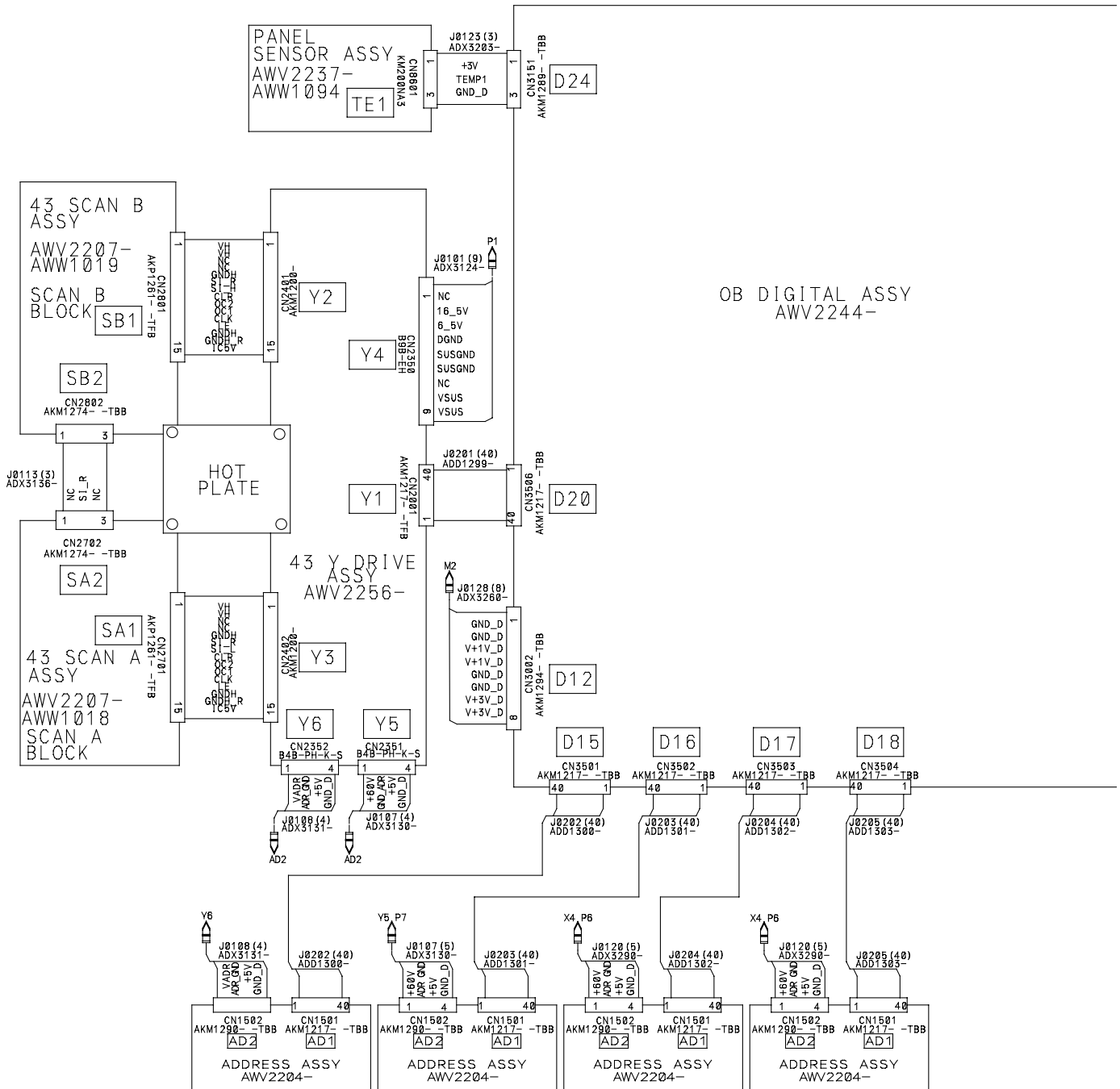
## PDP SERVICE ASSY 436P (AWU1135) PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
NSP 1	Panel Chassis (436) Assy	AWU1145	25	Rear Case (436) (for transport)	ANE1640
NSP 2	43 ADDRESS Assy	AWV2204	26	Screw (3x40P)	ABA1332
NSP 3	43 SCAN A Assy	AWW1018	27	Screw	ABZ30P080FTC
NSP 4	43 SCAN B Assy	AWW1019	28	Screw	AMZ30P060FTB
5	PCB Spacer	AEC1944	29	Screw	APZ30P080FTB
6	Conductive Plate Holder	AMR3446	30	Screw	BBB30P120FNI
7	Address Holder Assy (436)	AMR3455	31	Screw	PMB30P060FTC
8	Tube Cover	AMR3445	32	Screw	TBZ40P080FTB
NSP 9	Chassis Assy (436)	ANA1833	33	Screw	VBB30P080FNI
10	Front Chassis VL (43)	AMA1016	34	•••••	
11	Front Chassis VR (43)	AMA1017	35	•••••	
12	Sub Frame L Assy (436)	ANA1864	NSP 36	Panel Caution (6G)	ARM1287
13	Sub Frame R Assy (436)	ANA1865	37	Pad (43T-L)	AHA2431
14	Front Chassis H Assy (43)	ANA1884	38	Pad (43T-R)	AHA2432
15	Address Heatsink (436)	ANH1641	39	Pad (43B-L)	AHA2433
16	Conductive plate XA	ANG2776	40	Pad (43B-R)	AHA2434
17	Cushion	AEB1424	41	Under Carton	AHD3346
18	Wire Saddle	AEC1745	NSP 42	Upper Carton (436 S.V.C)	AHD3436
19	Circuit Board Spacer	AEC1872	43	Sheet	AHG1331
20	Screw Rivet	AEC1877	44	Polyethylene Bag S	AHG1338
21	PCB Spacer	AEC1941			
22	Address Silicone A	AEH1093			
23	Power Sheet	AMR3447			
NSP 24	Front Case Assy 436 service (for transport)	AMB2895			

# 3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

## 3.1 OVERALL CONNECTION DIAGRAM (1/2)

- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.





3.2 OVERALL CONNECTION DIAGRAM (2/2)

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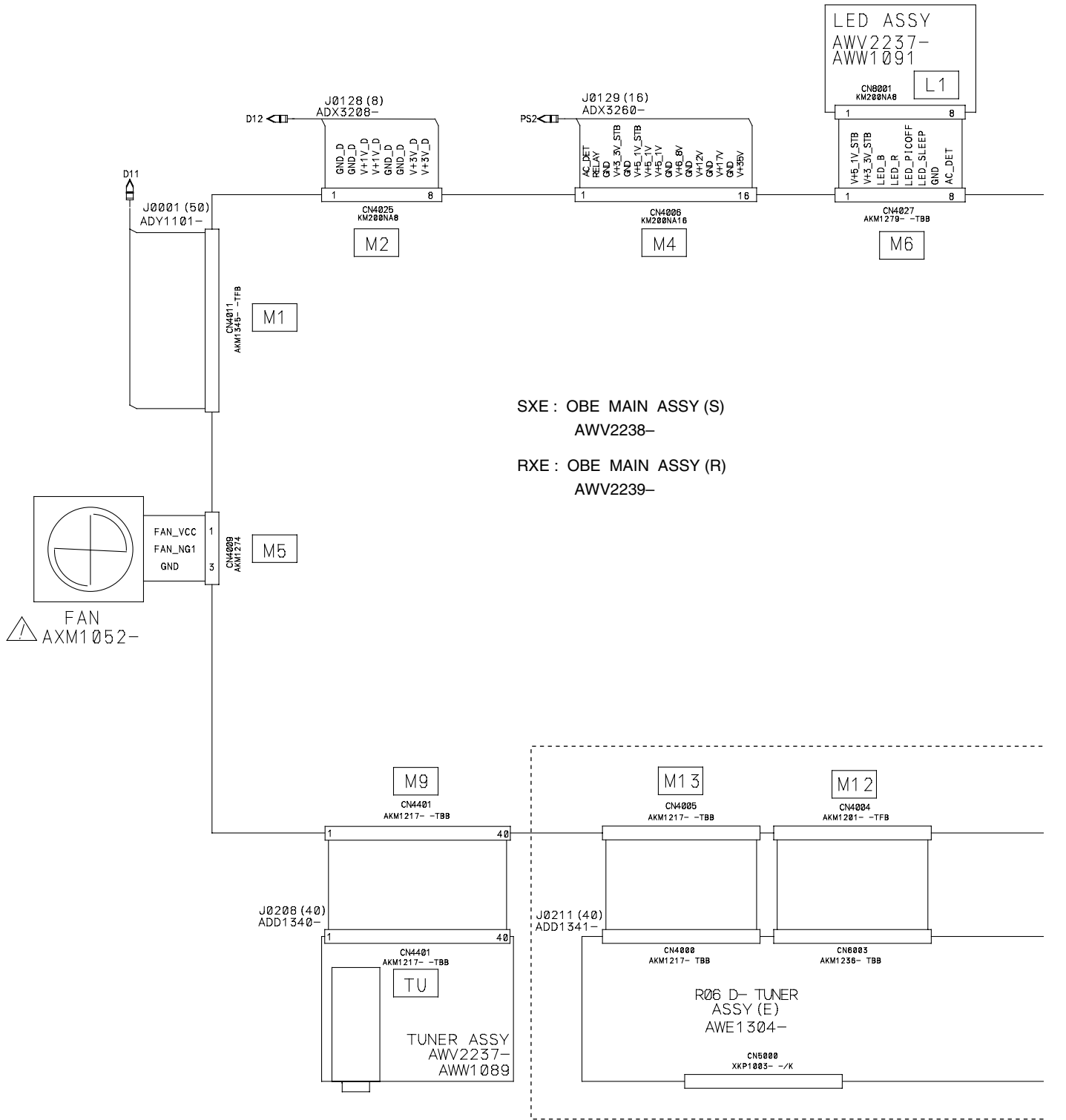
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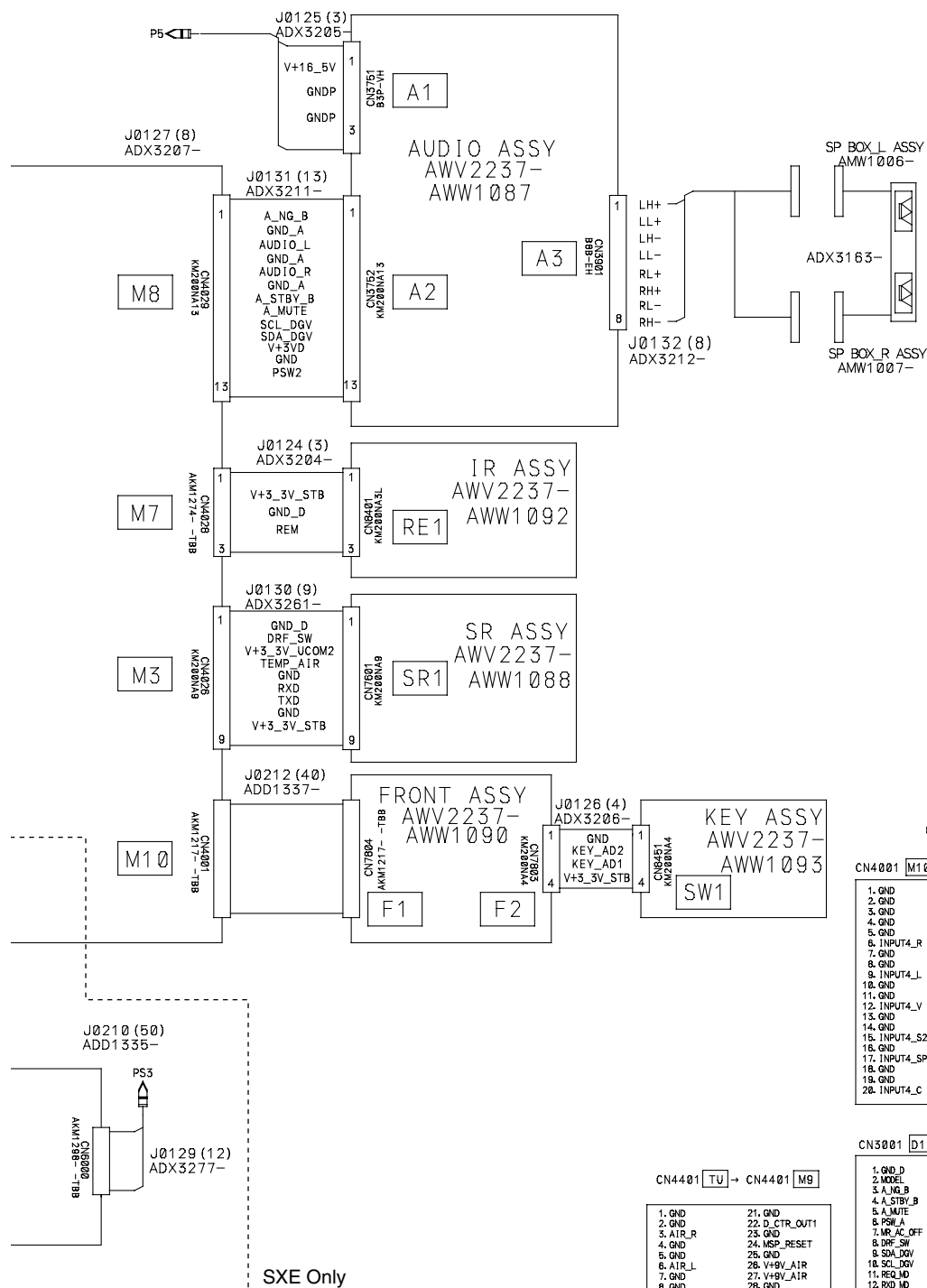
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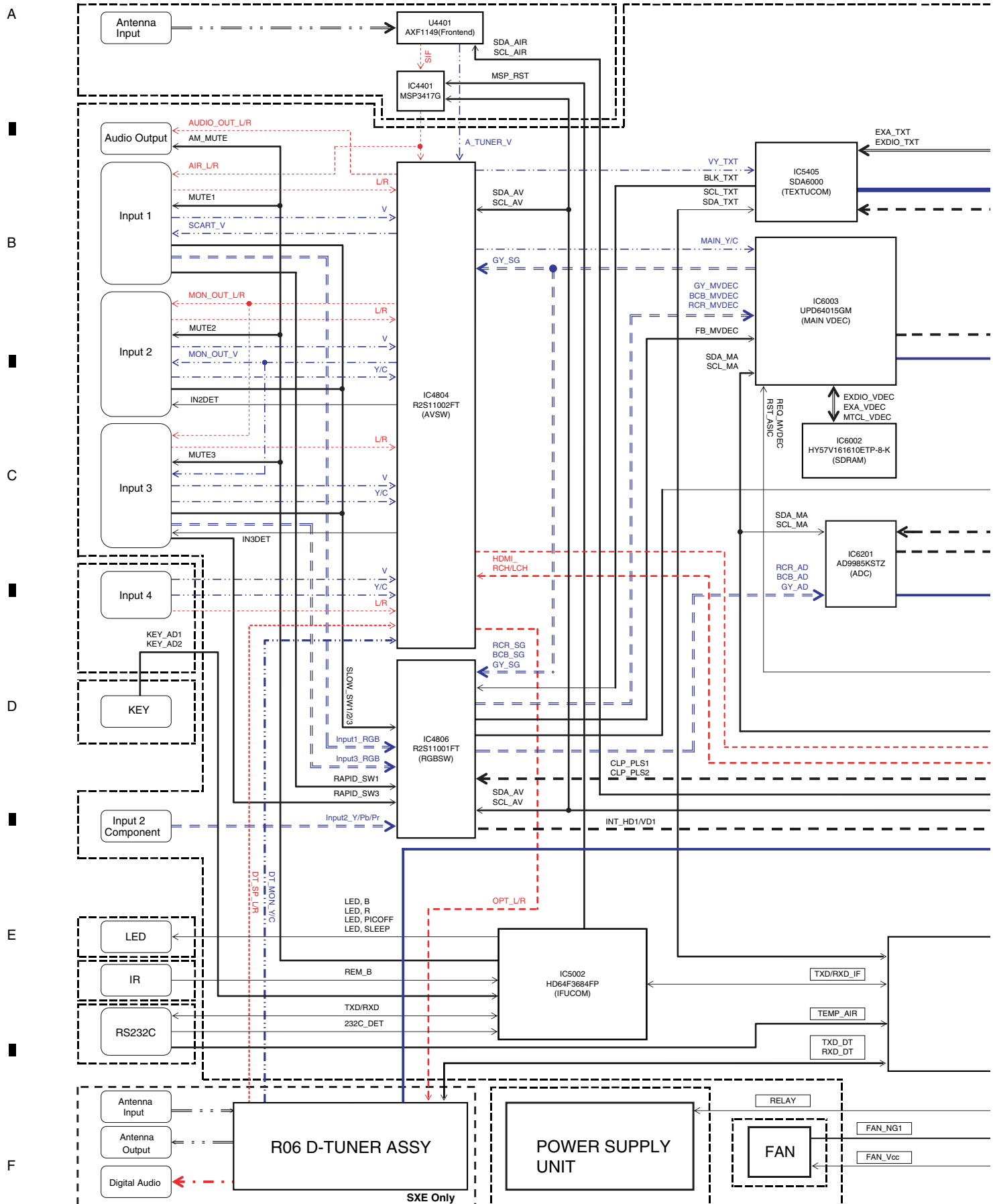
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### 3.3 SIGNAL BLOCK DIAGRAM

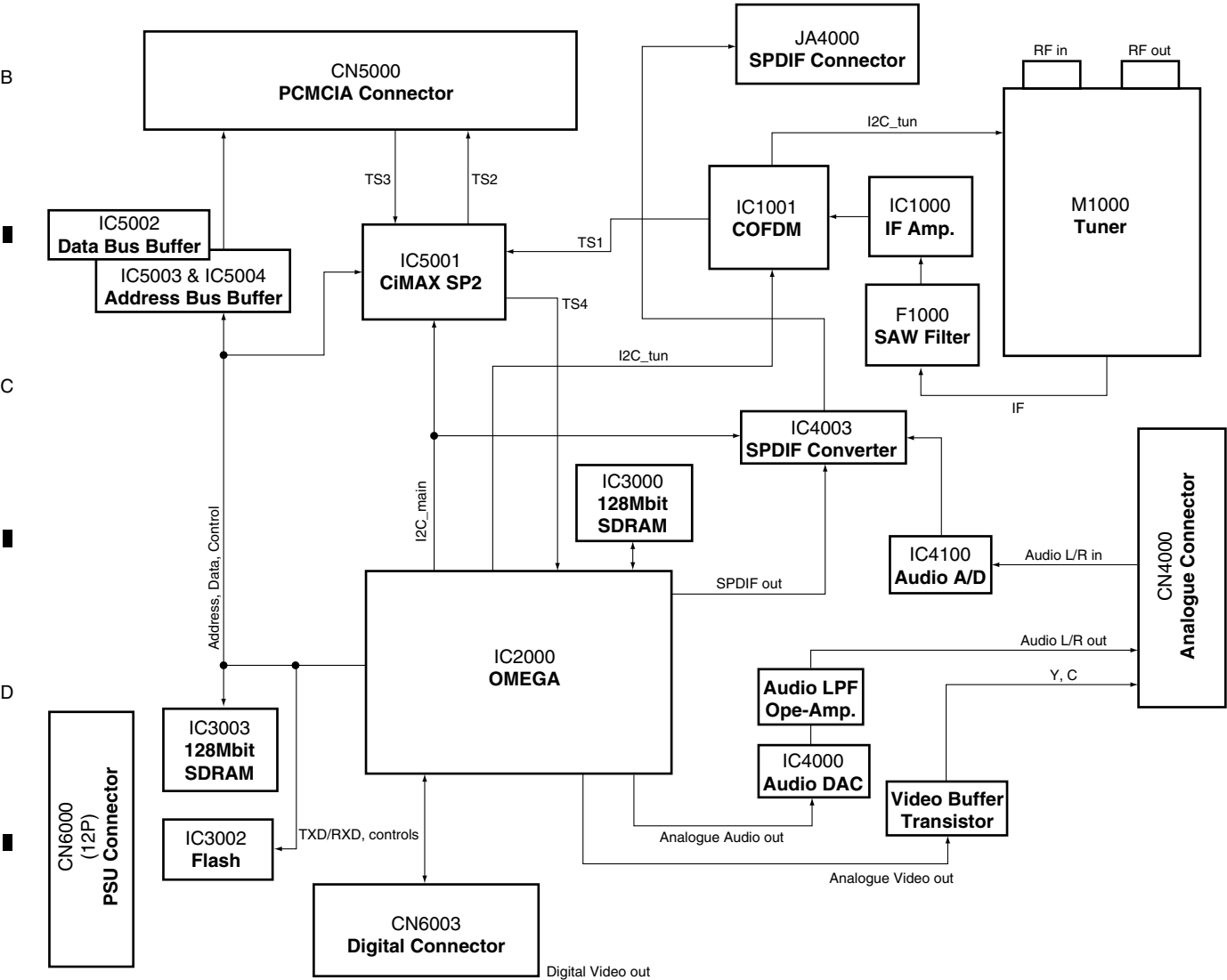




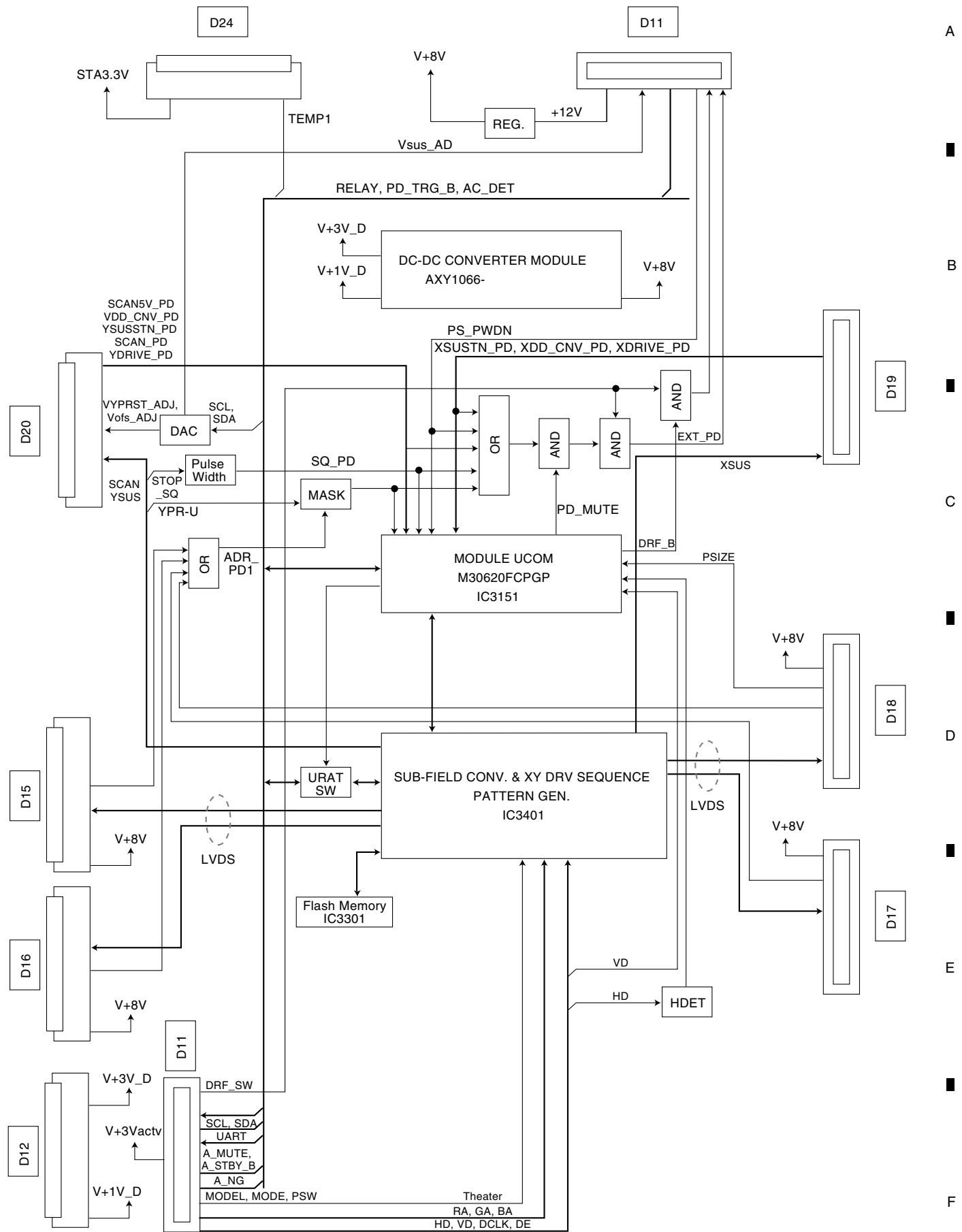


3.4 R06 D-TUNER ASSY

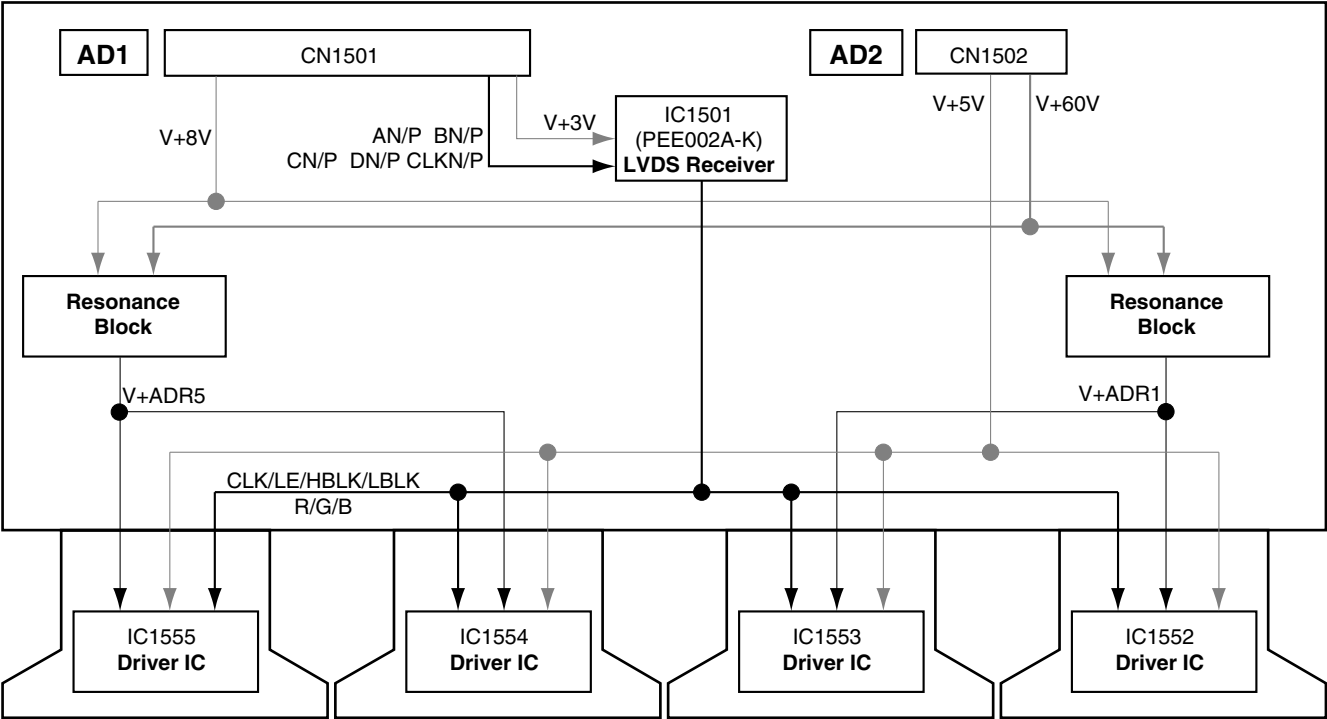
R06 D-TUNER ASSY



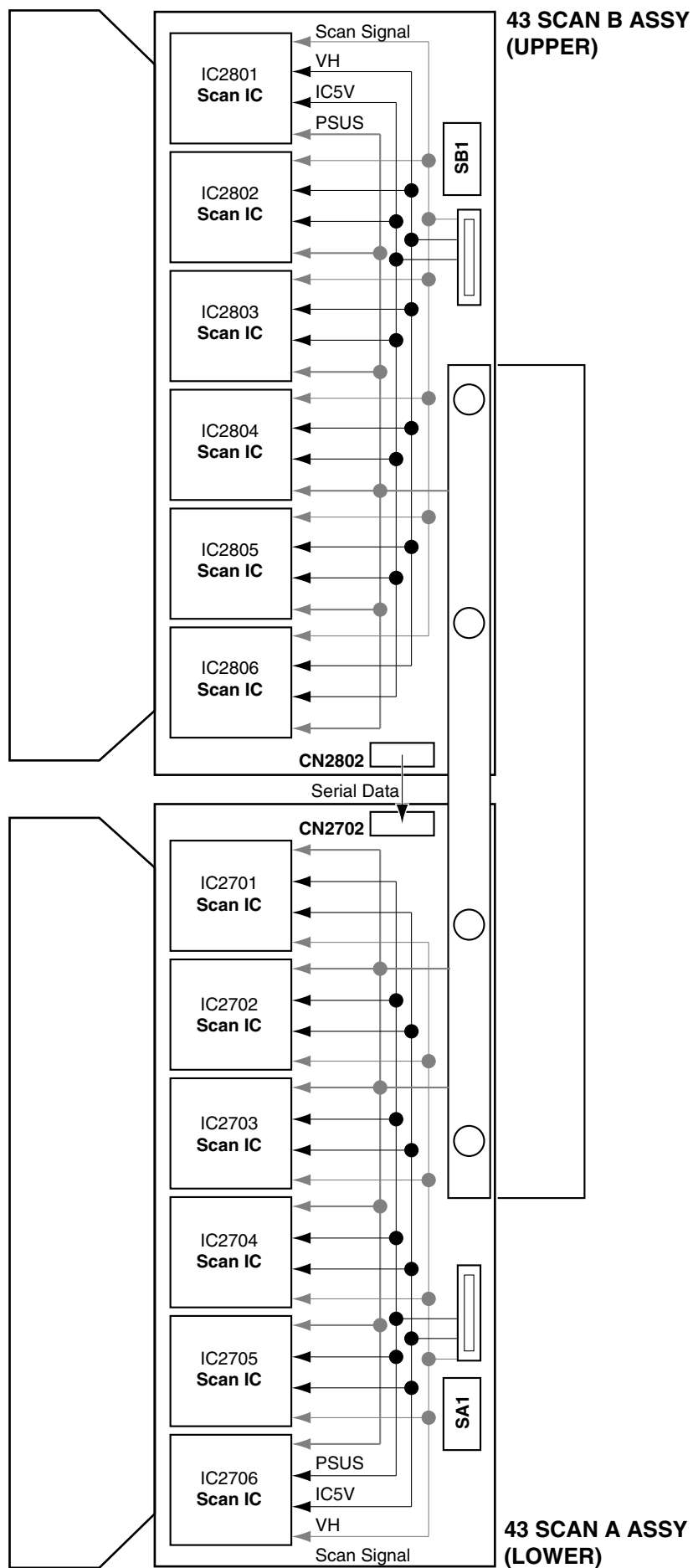
### 3.5 OB DIGITAL ASSY



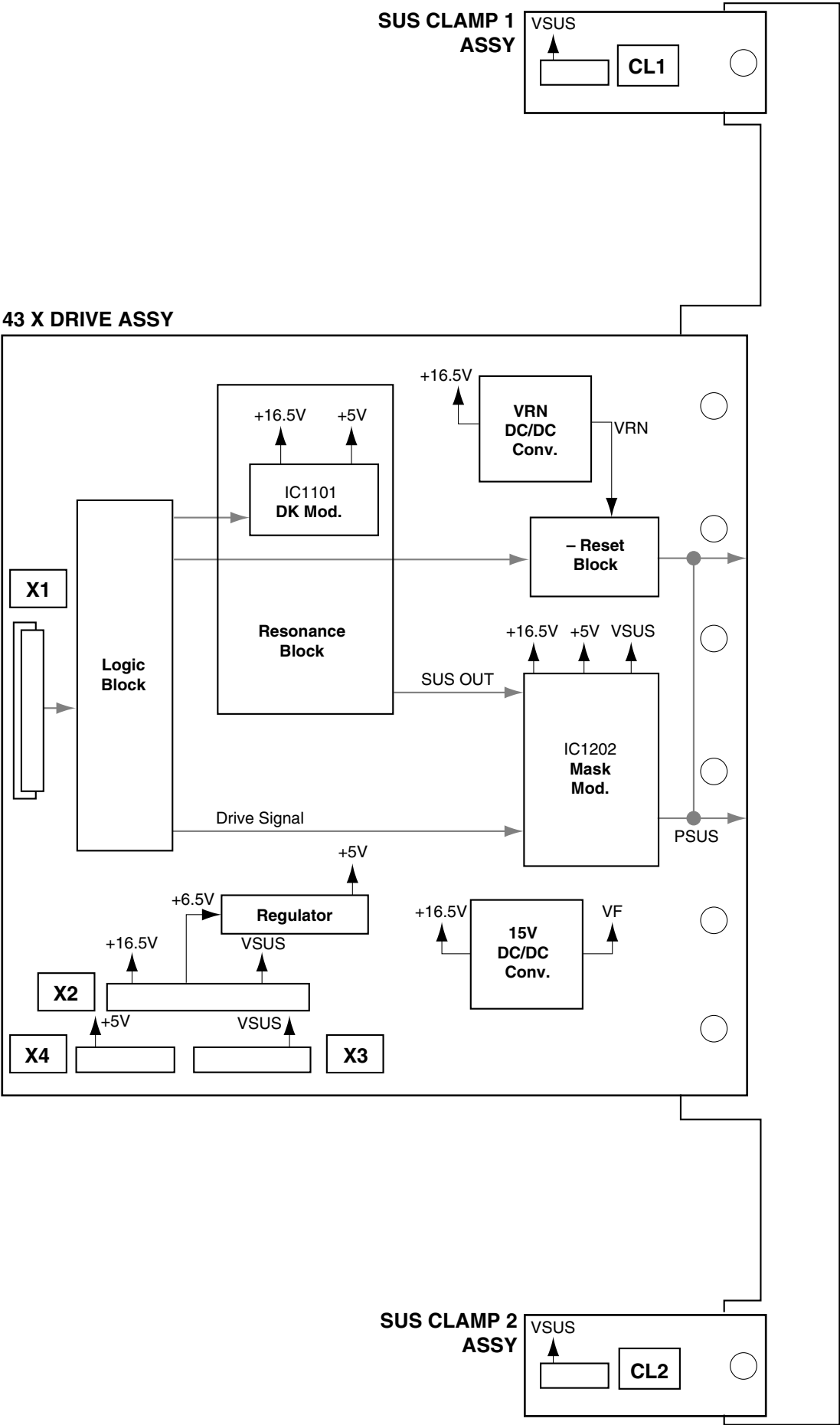
3.6 43 ADDRESS ASSY



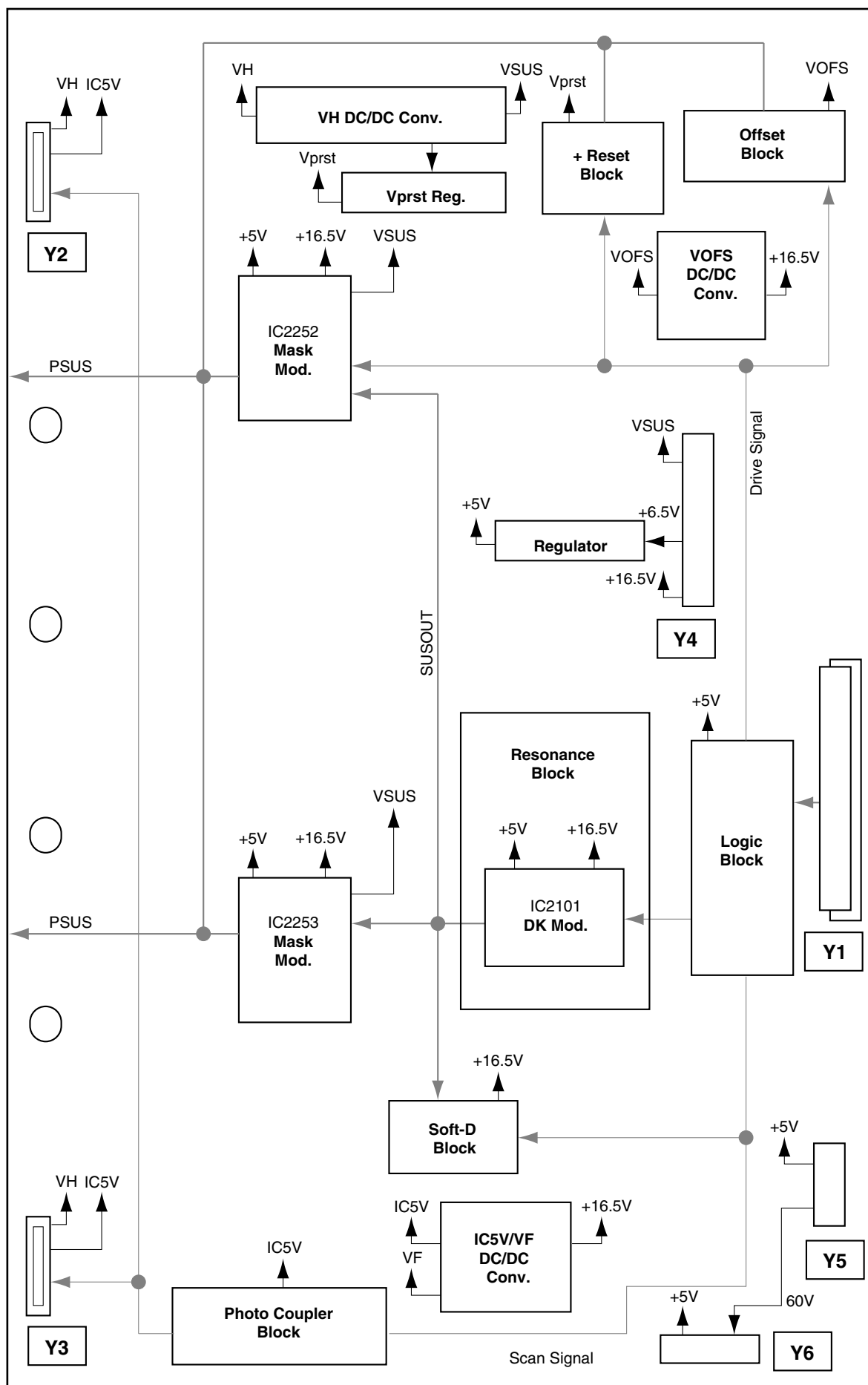
### 3.7 43 SCAN A and B ASSYS



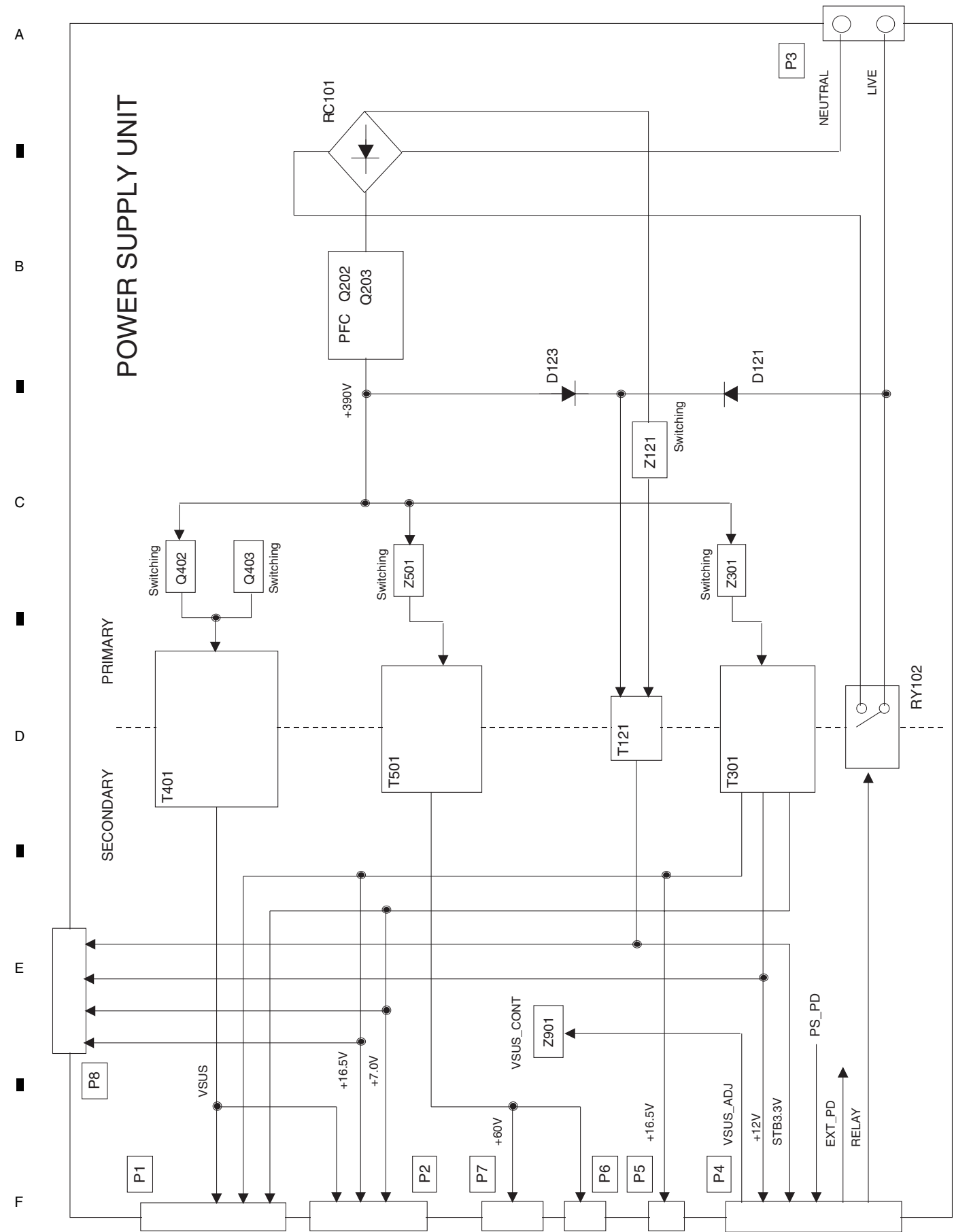
3.8 43 X DRIVE, SUS CLAMP 1 and SUS CLAMP 2 ASSYS



### 3.9 43 Y DRIVE ASSY



3.10 POWER SUPPLY UNIT





# 3.11 VOLTAGES

OBE MAIN ASSY			FRONT ASSY		
CN4001(AKM1217)		Voltage (V)	CN7804(AKM1217)		No.
No.	Name		Name	No.	
1	GND	0	GND	1	
2	GND	0	GND	2	
3	GND	0	GND	3	
4	GND	0	GND	4	
5	GND	0	GND	5	
6	INPUT4_R	4.5	INPUT4_R	6	
7	GND	0	GND	7	
8	GND	0	GND	8	
9	INPUT4_L	4.5	INPUT4_L	9	
10	GND	0	GND	10	
11	GND	0	GND	11	
12	INPUT4_V	2.5	INPUT4_V	12	
13	GND	0	GND	13	
14	GND	0	GND	14	
15	INPUT4_S2	0	INPUT4_S2	15	
16	GND	0	GND	16	
17	INPUT4_SPLUG	5	INPUT4_SPLUG	17	
18	GND	0	GND	18	
19	GND	0	GND	19	
20	INPUT4_C	0	INPUT4_C	20	
21	GND	0	GND	21	
22	GND	0	GND	22	
23	INPUT4_Y	2.5	INPUT4_Y	23	
24	GND	0	GND	24	
25	GND	0	GND	25	
26	GND	0	GND	26	
27	GND	0	GND	27	
28	GND	0	GND	28	
29	GND	0	GND	29	
30	GND	0	GND	30	
31	GND	0	GND	31	
32	MODE	0	MODE	32	
33	GND	0	GND	33	
34	GND	0	GND	34	
35	GND	0	GND	35	
36	GND	0	GND	36	
37	KEY_AD2	3.4	KEY_AD2	37	
38	KEY_AD1	3.4	KEY_AD1	38	
39	V+3_3V_STB	3.4	V+3_3V_STB	39	
40	GND	0	GND	40	

OBE MAIN ASSY			IR ASSY		
CN4028(AKM1274-)		Voltage (V)	CN8401(KM200NA3L)		No.
No.	Name		Name	No.	
1	V+3_3V_STB	3.3	V+3_3V_STB	1	
2	GND	0	GND	2	
3	REM_B	0	REM_B	3	

[436SXE MODEL only] OBE MAIN ASSY			R06 D-TUNER ASSY(E)		
CN4004(AKM1201-)		Voltage (V)	CN6003(AKM1236-)		No.
No.	Name		Name	No.	
1	GND	0	GND	1	
2	TXD_DT	3.3	TXD_DT	2	
3	RXD_DT	3.3	RXD_DT	3	
4	GND	0	GND	4	
5	DT_FNC	3.3	DT_FNC	5	
6	GND	0	GND	6	
7	CLK_DT	0 to 3.3	CLK_DT	7	
8	GND	0	GND	8	
9	Y7_DT	0 to 3.3	Y7_DT	9	
10	Y6_DT	0 to 3.3	Y6_DT	10	
11	GND	0	GND	11	
12	Y5_DT	0 to 3.3	Y5_DT	12	
13	Y4_DT	0 to 3.3	Y4_DT	13	
14	GND	0	GND	14	
15	Y3_DT	0 to 3.3	Y3_DT	15	
16	Y2_DT	0 to 3.3	Y2_DT	16	
17	GND	0	GND	17	
18	Y1_DT	0 to 3.3	Y1_DT	18	
19	Y0_DT	0 to 3.3	Y0_DT	19	
20	GND	0	GND	20	
21	CB7_DT	0 to 3.3	CB7_DT	21	
22	CB6_DT	0 to 3.3	CB6_DT	22	
23	GND	0	GND	23	
24	GND	0	GND	24	
25	GND	0	GND	25	

[436SXE MODEL only] OBE MAIN ASSY			R06 D-TUNER ASSY(E)		
CN4004(AKM1201-)		Voltage (V)	CN6003(AKM1236-)		No.
No.	Name		Name	No.	
26	GND	0	GND	26	
27	GND	0	GND	27	
28	GND	0	GND	28	
29	GND	0	GND	29	
30	GND	0	GND	30	
31	GND	0	GND	31	
32	GND	0	GND	32	
33	GND	0	GND	33	
34	GND	0	GND	34	
35	GND	0	GND	35	
36	GND	0	GND	36	
37	GND	0	GND	37	
38	GND	0	GND	38	
39	GND	0	GND	39	
40	GND	0	GND	40	
41	GND	0	GND	41	
42	GND	0	GND	42	
43	GND	0	GND	43	
44	GND	0	GND	44	
45	DE_DT	0	DE_DT	45	
46	GND	0	GND	46	
47	VD_DT	3.3	VD_DT	47	
48	GND	0	GND	48	
49	HD_DT	3.3	HD_DT	49	
50	GND	0	GND	50	

OBE MAIN ASSY			TUNER ASSY		
CN4401 (AKM1217-)		Voltage (V)	CN8501 (AKM1217-)		No.
No.	Name		Name	No.	
1	GND	0	GND	1	
2	GND	0	GND	2	
3	AIR_R	3.0	AIR_R	3	
4	GND	0	GND	4	
5	GND	0	GND	5	
6	AIR_L	3.0	AIR_L	6	
7	GND	0	GND	7	
8	GND	0	GND	8	
9	GND	0	GND	9	
10	SCL_AV	0-3.3	SCL_AV	10	
11	SDA_AV	0-3.3	SDA_AV	11	
12	GND	0	GND	12	
13	GND	0	GND	13	
14	V+5V_AIR	5.0	V+5V_AIR	14	
15	V+5V_AIR	5.0	V+5V_AIR	15	
16	GND	0	GND	16	
17	GND	0	GND	17	
18	A_TUNER_V	3.9	A_TUNER_V	18	
19	GND	0	GND	19	
20	V+3_3V_UCOM2	3.3	V+3_3V_UCOM2	20	
21	GND	0	GND	21	
22	D_CTR_OUT1	3.0	D_CTR_OUT1	22	
23	GND	0	GND	23	
24	MSP_RESET	5.0	MSP_RESET	24	
25	GND	0	GND	25	
26	V+9V_AIR	9.0	V+9V_AIR	26	
27	V+9V_AIR	9.0	V+9V_AIR	27	
28	GND	0	GND	28	
29	V+30V	30	V+30V	29	
30	V+30V	30	V+30V	30	
31	GND	0	GND	31	
32	GND	0	GND	32	
33	SCL_AIR	0-3.3	SCL_AIR	33	
34	SDA_AIR	0-3.3	SDA_AIR	34	
35	GND	0	GND	35	
36	IN3DET	0/5.0	IN3DET	36	
37	IN2DET	0/5.0	IN2DET	37	
38	IN2DET_B	0/3.3	IN2DET_B	38	
39	LINK_IO	5.0	LINK_IO	39	
40	GND	0	GND	40	

OBE MAIN ASSY			AUDIO ASSY		
CN4029(KM200NA13)		Voltage (V)	CN3752(KM200NA13)		No.
No.	Name		Name	No.	
1	A_NG_B	2.9	A_NG_B	1	
2	GND_A	0	GND_A	2	
3	AUDIO_L	5.1	AUDIO_L	3	
4	GND_A	0	GND_A	4	
5	AUDIO_R	5.1	AUDIO_R	5	
6	GND_A	0	GND_A	6	
7	A_STBY_B	3.3	A_STBY_B	7	
8	A_MUTE	0	A_MUTE	8	
9	SCL_DGV	0-3.3	SCL_DGV	9	
10	SDA_DGV	0-3.3	SDA_DGV	10	
11	V+3VD	3.3	V+3VD	11	
12	GND	0	GND	12	
13	PSW_2	5.2	PSW_2	13	

OBE MAIN ASSY			LED ASSY		
CN4027(AKM1279)		Voltage (V)	CN8001(KM200NA8)		No.
No.	Name		Name	No.	
1	V+5_1V_STB	5.1	V+5_1V_STB	1	
2	V+3_3V_STB	3.3	V+3_3V_STB	2	
3	LED_B	0	LED_B	3	
4	LED_R	3.3	LED_R	4	
5	LED_PICOFF	3.3	LED_PICOFF	5	
6	LED_SLEEP	3.3	LED_SLEEP	6	
7	GND	0	GND	7	
8	AC_DET	0	AC_DET	8	

OBE MAIN ASSY			SR ASSY		
CN4026(KM200NA9)		Voltage (V)	CN7601(KM200NA9)		No.
No.	Name		Name	No.	
1	GND_D	0	GND_D	1	
2	DRF_SW	3.0	DRF_SW	2	
3	V+3_3V_UCOM2	3.3	V+3_3V_UCOM2	3	
4	TEMP_AIR	2.2	TEMP_AIR	4	
5	GND	0	GND	5	
6	RXD	3.3	RXD	6	
7	TXD	3.3	TXD	7	
8	GND	0	GND	8	
9	V+3_3V_STB	3.3	V+3_3V_STB	9	

[436SXE MODEL only]

OBE MAIN ASSY

R06 D-TUNER ASSY(E)

CN4005 (AKM1217-)	Voltage (V)	CN4000 (AKM1217-)	No.
No.	Name	Name	No.
1	GND	GND	1
2	GND	GND	2
3	GND	GND	3
4	GND	GND	4
5	GND	GND	5
6	GND	GND	6
7	DT_SP_R	DT_SP_R	7
8	GND	GND	8
9	DT_SP_L	DT_SP_L	9
10	GND	GND	10
11	OPT_R	OPT_R	11
12	GND	GND	12
13	OPT_L	OPT_L	13
14	GND	GND	14
15	DT_MON_C	DT_MON_C	15
16	GND	GND	16
17	GND	GND	17
18	DT_MON_Y	DT_MON_Y	18
19	GND	GND	19
20	GND	GND	20
21	GND	GND	21
22	GND	GND	22
23	GND	GND	23
24	GND	GND	24
25	GND	GND	25
26	GND	GND	26
27	GND	GND	27
28	GND	GND	28
29	GND	GND	29
30	GND	GND	30
31	GND	GND	31
32	GND	GND	32
33	GND	GND	33
34	GND	GND	34
35	GND	GND	35
36	ANT_POW_EU	ANT_POW_EU	36
37	POW_DET	POW_DET	37
38	RST_DT	RST_DT	38
39	DT_DET	DT_DET	39
40	GND	GND	40

OBE MAIN ASSY

POWER SUPPLY UNIT

CN4006(KM200NA16)	Voltage (V)	CN7503(KM200NA16)	No.
No.	Name	Name	No.
1	AC_DET	AC_DET	1
2	RELAY	RELAY	2
3	GND	GND	3
4	V+3_3V_STB	V+3_3V_STB	4
5	GND	GND	5
6	V+5_1V_STB	V+5_1V_STB	6
7	V+5_1V	V+5_1V	7
8	V+5_1V	V+5_1V	8
9	GND	GND	9
10	V+6_8V	V+6_8V	10
11	GND	GND	11
12	V+12V	V+12V	12
13	GND	GND	13
14	V+17V	V+17V	14
15	GND	GND	15
16	V+35V	V+35V	16

FAN

OBE MAIN ASSY

CN4009(AKM1274-)	Voltage (V)	No.
No.	Name	No.
1	FAN_VCC	1
2	FAN_NG1	2
3	GND	3

[436SXE Model only]

R06 D-TUNER ASSY(E)

POWER SUPPLY UNIT

CN2500(AKM1298)	Voltage (V)	CN102(KM200NA12)	No.
No.	Name	Name	No.
1	V+35V	V+35V	1
2	GND	GND	2
3	V+17V	V+17V	3
4	GND	GND	4
5	V+12V	V+12V	5
6	GND	GND	6
7	V+6_5V	V+6_5V	7
8	V+5_1V_STB	V+5_1V_STB	8
9	V+5_1V	V+5_1V	9
10	V+5_1V	V+5_1V	10
11	GND	GND	11
12	V+3V	V+3V	12

## OB DIGITAL ASSY

### CN3001(D11) ⇔ MAIN ASSY

Pin No.	Name	I/O	Function	Voltage(V)	TP
1	GND	—	GND	—	TP3025
2	MODEL	I	Model distinction	1.7	TP3018
3	A_NG_B	I	(Audio) Ahnormal detect	2.9	TP3012
4	A_STBY_B	O	Audio stand by-signal	3.3	TP3013
5	A_MUTE	O	Audio mute signal input	0	TP3011
6	PSW_A	O	Function stand by signal for audio	2.7	TP3019
7	MR_AC_OFF	I	AC state input for MR side	3.3	TP3038
8	DRF_SW	I	Control signal for large power section	3.3	TP3001
9	SDA_DGV	O	IIC control signal	0-3.3	TP3014
10	SCL_DGV	O	IIC control signal	0-3.3	TP3015
11	REQ_MD	O	Communication demand to main U-COM	0-3.3	TP3016
12	RXD_MD	O	URAT communication data with mai UCOM	0-3.3	TP3163
13	TXD_MD	I	URAT communication data with mai UCOM	0-3.3	TP3166
14	VIS	I	Control signal from Carrera	0	TP3020
15	TEATHER	I	Control signal from pure sinema	0	TP3021
16	VD	I	V sync	0-3.3	TP3037
17	HD	I	H sync	0-3.3	TP3036
18	DE	I	Data enable signal	0-3.3	TP3035
19	GND	—	GND	-	TP3025
20	CLK	—	Data clock signal	0-3.3	TP3034
21	GND	—	GND	-	TP3025
22	V+3V_UCOM2	I	Vcc +3.3V input for panel side module U-com line	3.3	TP3186
23	GND	—	GND	-	TP3025
24	RA IN9	I	8bit video/signal input (RED)	0-3.3	TP3057
25	RA IN8	I	8bit video/signal input (RED)	0-3.3	TP3056
26	RA IN7	I	8bit video/signal input (RED)	0-3.3	TP3055
27	RA IN6	I	8bit video/signal input (RED)	0-3.3	TP3054
28	RA IN5	I	8bit video/signal input (RED)	0-3.3	TP3053
29	RA IN4	I	8bit video/signal input (RED)	0-3.3	TP3052
30	RA IN3	I	8bit video/signal input (RED)	0-3.3	TP3051
31	RA IN2	I	8bit video/signal input (RED)	0-3.3	TP3050
32	GND	—	GND	-	TP3025
33	GA IN9	I	8bit video/signal input (GREEN)	0-3.3	TP3067
34	GA IN8	I	8bit video/signal input (GREEN)	0-3.3	TP3066
35	GA IN7	I	8bit video/signal input (GREEN)	0-3.3	TP3065
36	GA IN6	I	8bit video/signal input (GREEN)	0-3.3	TP3064
37	GA IN5	I	8bit video/signal input (GREEN)	0-3.3	TP3063
38	GA IN4	I	8bit video/signal input (GREEN)	0-3.3	TP3062
39	GA IN3	I	8bit video/signal input (GREEN)	0-3.3	TP3061
40	GA IN2	I	8bit video/signal input (GREEN)	0-3.3	TP3060
41	GND	—	GND	-	TP3025
42	BA IN9	I	8bit video/signal input (BLUE)	0-3.3	TP3077
43	BA IN8	I	8bit video/signal input (BLUE)	0-3.3	TP3076
44	BA IN7	I	8bit video/signal input (BLUE)	0-3.3	TP3075
45	BA IN6	I	8bit video/signal input (BLUE)	0-3.3	TP3074
46	BA IN5	I	8bit video/signal input (BLUE)	0-3.3	TP3073
47	BA IN4	I	8bit video/signal input (BLUE)	0-3.3	TP3072
48	BA IN3	I	8bit video/signal input (BLUE)	0-3.3	TP3071
49	BA IN2	I	8bit video/signal input (BLUE)	0-3.3	TP3070
50	GND	—	GND	-	TP3025

### CN3505(D19) ⇔ X DRIVE ASSY

Pin No.	Name	I/O	Function	Voltage(V)	TP
1	PSW	O	Function standby control signal	0	TP3519
2	XSUS_PD	I	X drive PD signal	0	TP3513
3	XDD_PD	I	X drive PD signal	0	TP3514
4	XDRV_PD	I	X drive PD signal	0	TP3515
5	GND	—	GND	-	-
6	XRsv1	I	X drive control signal (reserve)	-	-
7	XSUS-MSK	I	X drive control signal (reserve)	0-3.3	-
8	GND	—	GND	-	-
9	XNR-D	O	X drive control signal	0-3.3	-
10	GND	—	GND	-	-
11	XSUS-G	O	X drive control signal	0-3.3	-
12	GND	—	GND	-	-
13	XSUS-D	O	X drive control signal	0-3.3	-
14	GND	—	GND	-	-
15	XSUS-U	O	X drive control signal	0-3.3	-
16	GND	—	GND	-	-
17	XSUS-B	O	X drive control signal	0-3.3	-
18	GND	—	GND	-	-

### CN3506(D20) ⇔ Y DRIVE ASSY

Pin No.	Name	I/O	Function	Voltage(V)	TP
1	GND	—	GND	-	-
2	SCN5V_PD	I	Y drive PD signal	0	TP3507
3	SI_L	O	Scan control signal	0-3.3	-
4	SI_H	O	Scan control signal	0-3.3	-
5	GND	—	GND	-	-
6	CLR	O	Scan control signal	0-3.3	-
7	CLK	O	Scan control signal	0-3.3	-
8	GND	—	GND	-	-
9	LE	O	Scan control signal	0-3.3	-
10	OC2	O	Scan control signal	0-3.3	-
11	OC1(-1)	O	Scan control signal	0-3.3	-
12	GND	—	GND	-	-
13	YSUS-B	O	Y drive/control signal	0-3.3	-
14	YSUS-U	O	Y drive/control signal	0-3.3	-
15	GND	—	GND	-	-
16	YSUS-D	O	Y drive/control signal	0-3.3	-
17	YSUS-G	O	Y drive/control signal	0-3.3	-
18	GND	—	GND	-	-
19	YPR-U	O	Y drive/control signal	0-3.3	-
20	YRsv1	—	Y drive/control signal (reserve)	-	-
21	GND	—	GND	-	-
22	YSUS-MSK	O	Y drive/control signal	0-3.3	-
23	YNRST	O	Y drive/control signal	0-3.3	-
24	YRsv2	—	Y drive/control signal (reserve)	-	-
25	GND	—	GND	-	-
26	YENOFs	O	Y drive/control signal	0-3.3	-
27	YRsv3	O	Y drive/control signal (reserve)	-	-
28	YSOFT-D	O	Y drive/control signal	0-3.3	-
29	GND	—	GND	-	-
30	VOFS_ADJ	—	Vofs offset adjust	1.85	TP3181
31	VYPRST_ADJ	O	Reset voltage adjust	1.21	TP3182
32	GND	—	GND	-	-
33	GND	—	GND	-	-
34	N.C	—	Not Connected	-	-
35	GND	—	GND	-	-
36	YDD_PD	I	Y drive PD signal	0	TP3509
37	YSUS_PD	I	Y drive PD signal	0	TP3510
38	SCAN_PD	I	Y drive PD signal	0	TP3511
39	YDRV_PD	I	Y drive PD signal	0	TP3512
40	PSW	O	Function standby signal	0	TP3518

## CN3501(D15) ⇔ ADDRESS ASSY

Pin No.	Name	I/O	Function	Voltage (V)	TP
1	N.C		Not Connected	-	
2	ADR_PD	I	Address PD signal	0-4	TP3501
3	N.C		Not Connected	-	
4	GND	-	GND	-	-
5	V+8V	O	+8V Vcc	8	TP3618
6	V+8V	O	+8V Vcc	8	TP3618
7	GND	-	GND	-	-
8	GND	-	GND	-	-
9	N.C		Not Connected	-	
10	TA-	O	LVDS data	1-1.4	
11	TA+	O	LVDS data	1-1.4	
12	N.C		Not Connected	-	
13	GND	-	GND	-	-
14	N.C		Not Connected	-	
15	TB-	O	LVDS data	1-1.4	
16	TB+	O	LVDS data	1-1.4	
17	N.C		Not Connected	-	
18	GND	-	GND	-	-
19	N.C		Not Connected	-	
20	TC-	O	LVDS data	1-1.4	
21	TC+	O	LVDS data	1-1.4	
22	N.C		Not Connected	-	
23	GND	-	GND	-	-
24	N.C		Not Connected	-	
25	TCLK-	O	LVDS data	1-1.4	
26	TCLK+	O	LVDS data	1-1.4	
27	N.C		Not Connected	-	
28	GND	-	GND	-	-
29	N.C		Not Connected	-	
30	TD-	O	LVDS data	1-1.4	
31	TD+	O	LVDS data	1-1.4	
32	N.C		Not Connected	-	
33	GND	-	GND	-	-
34	GND	-	GND	-	-
35	V+3V_D	O	+3V Vcc	3.3	TP3607
36	V+3V_D	O	+3V Vcc	3.3	TP3607
37	GND	-	GND	-	-
38	ADRS_3	O	Output timing control	0	
39	ADRS_2	O	Output timing control	0	
40	GND	-	GND	-	-

## CN3502(D16) ⇔ ADDRESS ASSY

Pin No.	Name	I/O	Function	Voltage (V)	TP
1	N.C		Not Connected	-	
2	ADR_PD	I	Address PD signal	0-4	TP3502
3	N.C		Not Connected	-	
4	GND	-	GND	-	-
5	V+8V	O	+8V Vcc	8	TP3618
6	V+8V	O	+8V Vcc	8	TP3618
7	GND	-	GND	-	-
8	GND	-	GND	-	-
9	N.C		Not Connected	-	
10	TA-	O	LVDS data	1-1.4	
11	TA+	O	LVDS data	1-1.4	
12	N.C		Not Connected	-	
13	GND	-	GND	-	-
14	N.C		Not Connected	-	
15	TB-	O	LVDS data	1-1.4	
16	TB+	O	LVDS data	1-1.4	
17	N.C		Not Connected	-	
18	GND	-	GND	-	-
19	N.C		Not Connected	-	
20	TC-	O	LVDS data	1-1.4	
21	TC+	O	LVDS data	1-1.4	
22	N.C		Not Connected	-	
23	GND	-	GND	-	-
24	N.C		Not Connected	-	
25	TCLK-	O	LVDS data	1-1.4	
26	TCLK+	O	LVDS data	1-1.4	
27	N.C		Not Connected	-	
28	GND	-	GND	-	-
29	N.C		Not Connected	-	
30	TD-	O	LVDS data	1-1.4	
31	TD+	O	LVDS data	1-1.4	
32	N.C		Not Connected	-	
33	GND	-	GND	-	-
34	GND	-	GND	-	-
35	V+3V_D	O	+3V Vcc	3.3	TP3607
36	V+3V_D	O	+3V Vcc	3.3	TP3607
37	GND	-	GND	-	-
38	ADRS_3	O	Output timing control	0	
39	ADRS_2	O	Output timing control	0	
40	GND	-	GND	-	-

**CN3503(D17) ⇔ ADDRESS ASSY**

Pin No.	Name	I/O	Function	Voltage (V)	TP
1	N.C		Not connected	-	
2	ADR_PD	I	Address PD signal	0-4	TP3503
3	N.C		Not connected	-	
4	GND	-	GND	-	-
5	V+8V	O	+8V Vcc	8	TP3618
6	V+8V	O	+8V Vcc	8	TP3618
7	GND	-	GND	-	-
8	GND	-	GND	-	-
9	N.C		Not connected	-	
10	TA-	O	LVDS data	1-1.4	
11	TA+	O	LVDS data	1-1.4	
12	N.C		Not connected	-	
13	GND	-	GND	-	-
14	N.C		Not connected	-	
15	TB-	O	LDVS data	1-1.4	
16	TB+	O	LDVS data	1-1.4	
17	N.C		Not connected	-	
18	GND	-	GND	-	-
19	N.C		Not connected	-	
20	TC-	O	LVDS data	1-1.4	
21	TC+	O	LVDS data	1-1.4	
22	N.C		Not connected	-	
23	GND	-	GND	-	-
24	N.C		Not connected	-	
25	TCLK-	O	LVDS data	1-1.4	
26	TCLK+	O	LVDS data	1-1.4	
27	N.C		Not connected	-	
28	GND	-	GND	-	-
29	N.C		Not connected	-	
30	TD-	O	LVDS data	1-1.4	
31	TD+	O	LVDS data	1-1.4	
32	N.C		Not connected	-	
33	GND	-	GND	-	-
34	GND	-	GND	-	-
35	V+3V_D	O	+3V Vcc	3.3	TP3607
36	V+3V_D	O	+3V Vcc	3.3	TP3607
37	GND	-	GND	-	-
38	ADRS_3	O	Output timing controled	0	
39	ADRS_2	O	Output timing controled	0	
40	GND	-	GND	-	-

**CN3504(D18) ⇔ ADDRESS ASSY**

Pin No.	Name	I/O	Function	Voltage (V)	TP
1	N.C		Not connected	-	
2	ADR_PD	I	Address PD signal	0-4	TP3504
3	PSIZE	I	Size distinction signal	3.3	
4	GND	-	GND	-	-
5	V+8V	O	+8V Vcc	8	TP3618
6	V+8V	O	+8V Vcc	8	TP3618
7	GND	-	GND	-	-
8	GND	-	GND	-	-
9	N.C		Not connected	-	
10	TA-	O	LVDS data	1-1.4	
11	TA+	O	LVDS data	1-1.4	
12	N.C		Not connected	-	
13	GND	-	GND	-	-
14	N.C		Not connected	-	
15	TB-	O	LDVS data	1-1.4	
16	TB+	O	LDVS data	1-1.4	
17	N.C		Not connected	-	
18	GND	-	GND	-	-
19	N.C		Not connected	-	
20	TC-	O	LVDS data	1-1.4	
21	TC+	O	LVDS data	1-1.4	
22	N.C		Not connected	-	
23	GND	-	GND	-	-
24	N.C		Not connected	-	
25	TCLK-	O	LVDS data	1-1.4	
26	TCLK+	O	LVDS data	1-1.4	
27	N.C		Not connected	-	
28	GND	-	GND	-	-
29	N.C		Not connected	-	
30	TD-	O	LVDS data	1-1.4	
31	TD+	O	LVDS data	1-1.4	
32	N.C		Not connected	-	
33	GND	-	GND	-	-
34	GND	-	GND	-	-
35	V+3V_D	O	+3V Vcc	3.3	TP3607
36	V+3V_D	O	+3V Vcc	3.3	TP3607
37	GND	-	GND	-	-
38	ADRS_3	O	Output timing controled	0	
39	ADRS_2	O	Output timing controled	0	
40	GND	-	GND	-	-

**CN5601(D1) ⇔ POWER SUPPLY UNIT**

Pin No.	Name	I/O	Function	Voltage (V)	TP
1	V+12V	I	+12V Vcc input	12	TP3606
2	V+12V	I	+12V Vcc input	12	TP3606
3	GND	-	GND	-	-
4	GND	-	GND	-	-
5	N.C		Not connected	-	
6	GND	-	GND	-	-
7	N.C		Not connected	-	
8	EXT_PD	O	Power down signal	0	TP3632
9	VSUS_ADJ	O	Vsua adjust signal	1.67	TP3633
10	PS_PD	I	Powerdown detect signal for POWER SUPPLY	0	TP3634
11	RELAY	O	Replay control signal	3.3	TP3626
12	DRF_B	O	Control signal for large power section	3.3	TP3616
13	AC_DET	I	AC state output panel side	3.3	TP3635
14	PD_TRG_B	I	Powerdown trigger	3.3	TP3636

**CN3002(D12) ⇔ MAIN ASSY**

Pin No.	Name	I/O	Function	Voltage (V)	TP
1	GND	O	GND	-	TP3024
2	GND	O	GND	-	TP3024
3	V+1V_D	O	+1.2V Vcc Output	1.24	TP3022
4	V+1V_D	-	+1.2V Vcc Output	1.24	TP3022
5	GND	-	GND	-	TP3024
6	GND	-	GND	-	TP3024
7	V+3V_D	O	+3.3V Vcc Output	3.3	TP3023
8	V+3V_D	O	+3.3V Vcc Output	3.3	TP3023

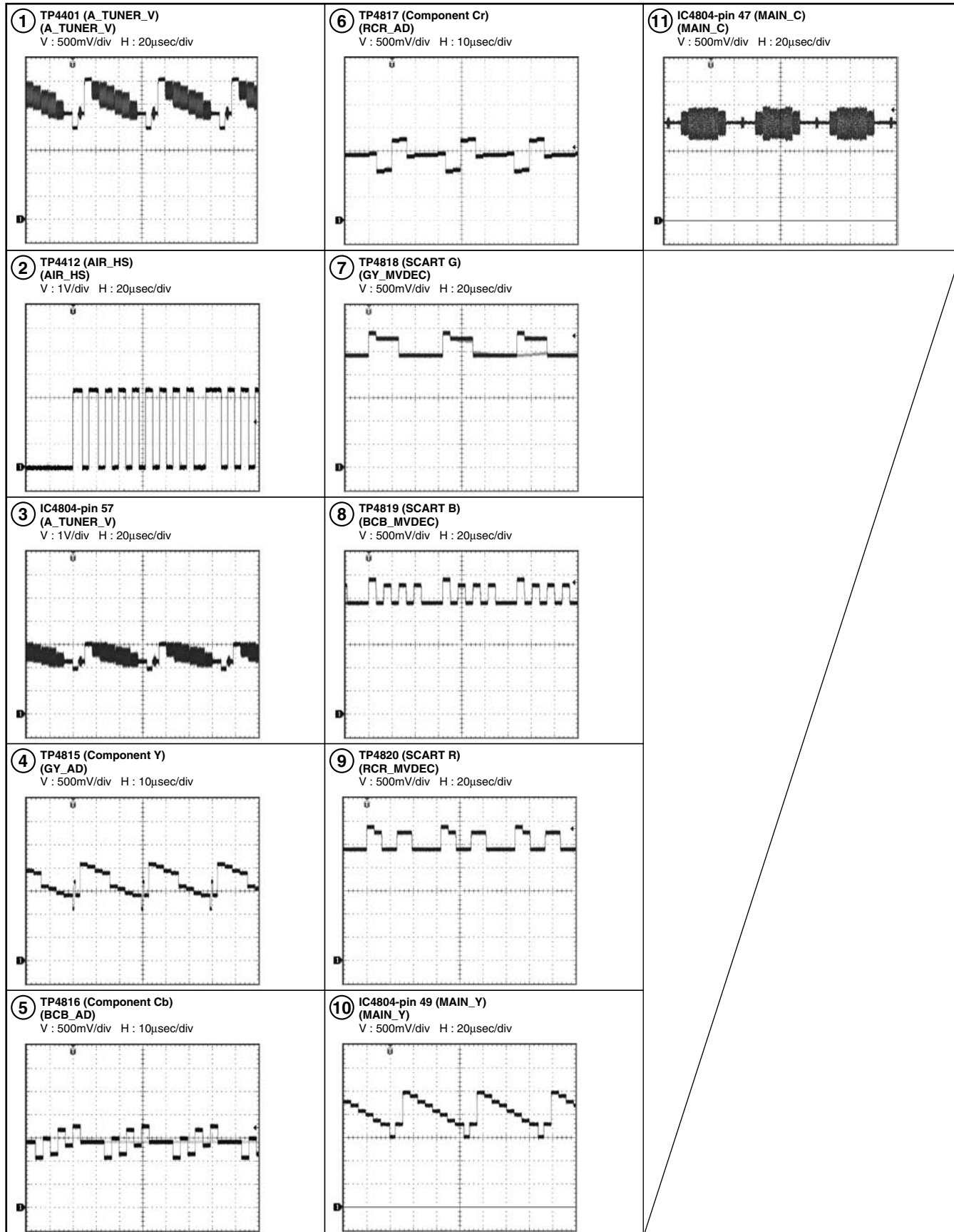
**CN3151(D24) ⇔ PANEL SENSOR ASSY**

Pin No.	Name	I/O	Function	Voltage (V)	TP
1	STA3.3V	O	+3.3V Vcc Output	3.3	TP3159
2	TEMP1	I	Panel thermal sensor signal	2	TP3161
3	GND	-	GND	-	TP3162

## 3.12 WAVEFORMS

Note : The encircled numbers denote measuring point in the schematic diagram.  
Refer to service manual (ARP3334).

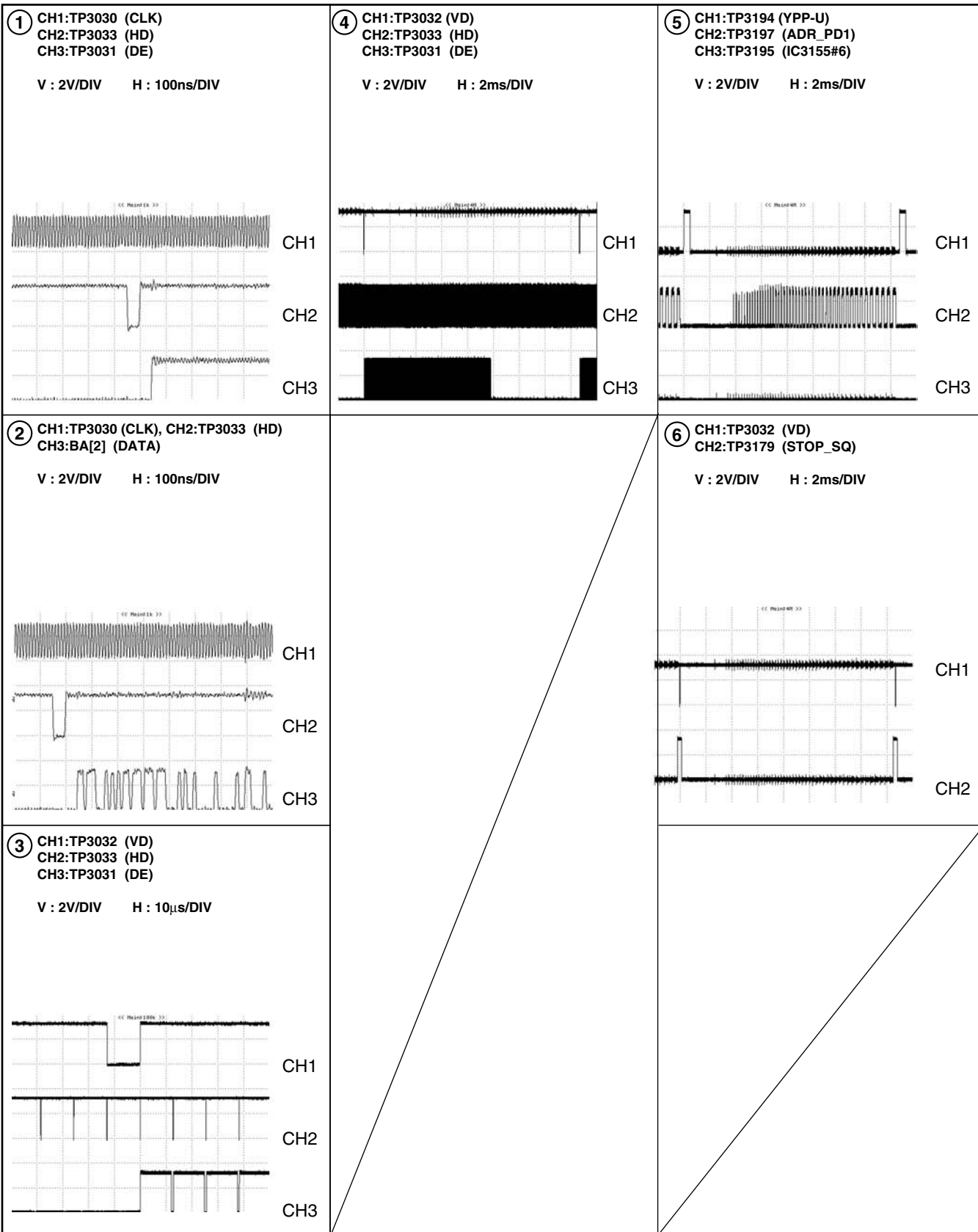
### OBE MAIN ASSY





# OB DIGITAL ASSY DIGITAL IF BLOCK

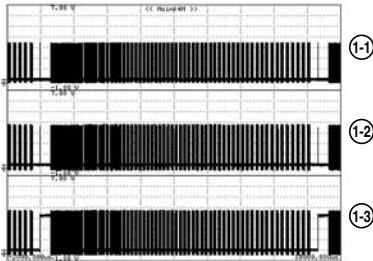
## MODULE UCOM BLOCK



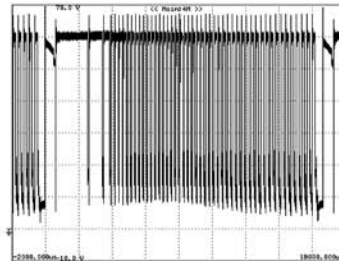
A

**43 ADDRESS ASSY****43 ADDRESS RESONANCE BLOCK****① Control signal of resonance circuit (1 field)**

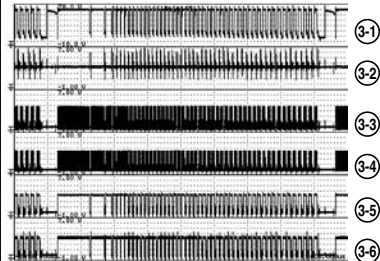
- Input : VIDEO 60Hz  
Signal : Color-bar (MKSS17)
- ①-1 **CH1 : ADR\_B2**  
V : 1V/div H : 2msec/div
- ①-2 **CH2 : ADR\_U2**  
V : 1V/div H : 2msec/div
- ①-3 **CH3 : ADR\_D2**  
V : 1V/div H : 2msec/div

**43 ADDRESS LOGIC BLOCK****② VADR (1 field)**

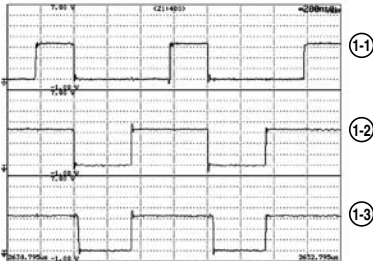
- Input : VIDEO 60Hz  
Signal : Color-bar (MKSS17)
- CH2 : IC1555-pin 3 (VDD2)**  
V : 10V/div H : 2msec/div

**TCP LOGIC****③ Incoming signal of TCP (1 field)**

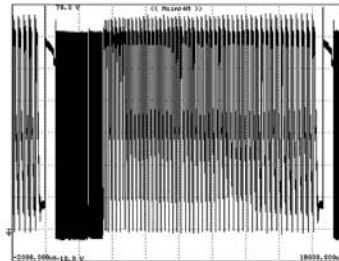
- Input : VIDEO 60Hz  
Signal : Color-bar (MKSS17)
- ③-1 **CH1 : IC1555-pin 3 (VDD2)**  
V : 10V/div H : 2msec/div
- ③-2 **CH2 : IC1555-pin 9 (A3)**  
V : 1V/div H : 2msec/div
- ③-3 **CH3 : IC1555-pin 16 (CLK)**  
V : 1V/div H : 2msec/div
- ③-4 **CH4 : IC1555-pin 14 (LE)**  
V : 1V/div H : 2msec/div
- ③-5 **CH5 : IC1555-pin 19 (HBLK)**  
V : 1V/div H : 2msec/div
- ③-6 **CH6 : IC1555-pin 17 (LBLK)**  
V : 1V/div H : 2msec/div

**① Control signal of resonance circuit (2 FS)**

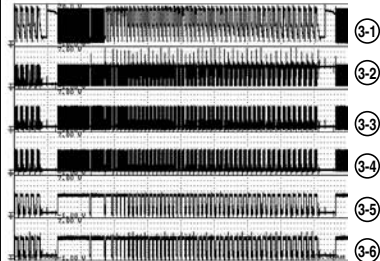
- Input : VIDEO 60Hz  
Signal : Color-bar (MKSS17)
- ①-1 **CH1 : ADR\_B2**  
V : 1V/div H : 2msec/div
- ①-2 **CH2 : ADR\_U2**  
V : 1V/div H : 2msec/div
- ①-3 **CH3 : ADR\_D2**  
V : 1V/div H : 2msec/div

**② VADR (1 field)**

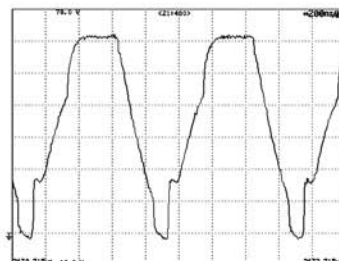
- Input : VIDEO 60Hz  
Signal : Checkered pattern of Black-White (MKSS13)
- CH2 : IC1555-pin 3 (VDD2)**  
V : 10V/div H : 2msec/div

**③ Incoming signal of TCP (1 field)**

- Input : VIDEO 60Hz  
Signal : Checkered pattern of Black-White (MKSS13)
- ③-1 **CH1 : IC1555-pin 3 (VDD2)**  
V : 10V/div H : 2msec/div
- ③-2 **CH2 : IC1555-pin 9 (A3)**  
V : 1V/div H : 2msec/div
- ③-3 **CH3 : IC1555-pin 16 (CLK)**  
V : 1V/div H : 2msec/div
- ③-4 **CH4 : IC1555-pin 14 (LE)**  
V : 1V/div H : 2msec/div
- ③-5 **CH5 : IC1555-pin 19 (HBLK)**  
V : 1V/div H : 2msec/div
- ③-6 **CH6 : IC1555-pin 17 (LBLK)**  
V : 1V/div H : 2msec/div

**② VADR (2 FS)**

- Input : VIDEO 60Hz  
Signal : Checkered pattern of Black-White (MKSS13)
- CH2 : IC1555-pin 3 (VDD2)**  
V : 10V/div H : 200nsec/div

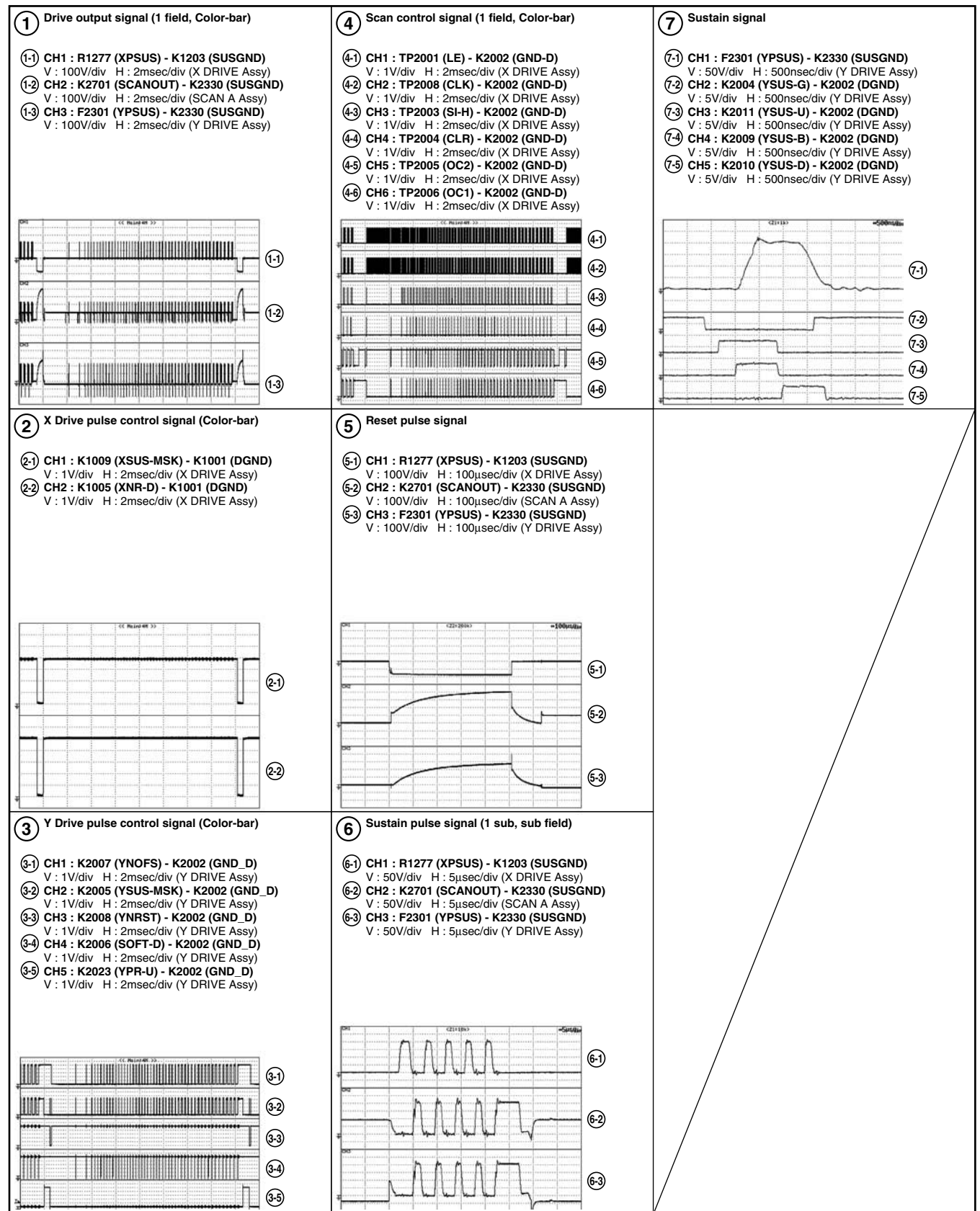
**③ Incoming signal of TCP (Resonance part)**

- Input : VIDEO  
Signal : Checkered pattern of Black-White (MKSS13)
- ③-1 **CH1 : IC1555-pin 3 (VDD2)**  
V : 10V/div H : 200nsec/div
- ③-2 **CH2 : IC1555-pin 9 (A3)**  
V : 1V/div H : 200nsec/div
- ③-3 **CH3 : IC1555-pin 16 (CLK)**  
V : 1V/div H : 200nsec/div
- ③-4 **CH4 : IC1555-pin 14 (LE)**  
V : 1V/div H : 200nsec/div
- ③-5 **CH5 : IC1555-pin 19 (HBLK)**  
V : 1V/div H : 200nsec/div
- ③-6 **CH6 : IC1555-pin 17 (LBLK)**  
V : 1V/div H : 200nsec/div





## 43 X DRIVE, 43 Y DRIVE ASSY



NOTES: ●Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.  
●The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.  
Therefore, when replacing, be sure to use parts of identical designation.  
●When ordering resistors, first convert resistance values into code form as shown in the following examples.  
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).  
560 Ω → 56 x 10<sup>1</sup> → 561 ..... RD1/4PU561J  
47k Ω → 47 x 10<sup>3</sup> → 473 ..... RD1/4PU473J  
0.5 Ω → R50 ..... RN2H R50K  
1 Ω → 1R0 ..... RS1P 1R0K  
Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).  
5.62k Ω → 562 x 10<sup>1</sup> → 5621 ..... RN1/4PC5621F

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	PDP-436SXE /WYVIXK5	PDP-436RXE /WYVXK5	PDP-436RXE /WYVI5
NSP	1..R06 D-TUNER ASSY	AWE1304	Not used	Not used
	1..OBE MAIN ASSY	AWV2238	AWV2239	AWV2239
	1..OBE FUKUGO ASSY	AWV2237	AWV2237	AWV2237
	2..AUDIO ASSY	AWW1087	AWW1087	AWW1087
	2..SR ASSY	AWW1088	AWW1088	AWW1088
	2..TUNER ASSY	AWW1089	AWW1089	AWW1089
	2..FRONT ASSY	AWW1090	AWW1090	AWW1090
	2..LED ASSY	AWW1091	AWW1091	AWW1091
	2..IR ASSY	AWW1092	AWW1092	AWW1092
	2..KEY ASSY	AWW1093	AWW1093	AWW1093
NSP	2..PANEL SENSOR ASSY	AWW1094	AWW1094	AWW1094
	2..SUBPOWER ASSY	AWW1095	AWW1095	AWW1095
	1..OB DIGITAL ASSY	AWV2244	AWV2244	AWV2244
	1..PANEL CHASSIS (436) ASSY	AWU1145	AWU1145	AWU1145
	2..43 ADDRESS ASSY	AWV2204	AWV2204	AWV2204
	2..43 SCAN ASSY	AWV2207	AWV2207	AWV2207
	3..43 SCAN A ASSY	AWW1018	AWW1018	AWW1018
	3..43 SCAN B ASSY	AWW1019	AWW1019	AWW1019
	1..43 X DRIVE ASSY ASSY	AWV2255	AWV2255	AWV2255
	2..43 X DRIVE ASSY	AWW1074	AWW1074	AWW1074
NSP	2..SUS CLAMP 1 ASSY	AWW1022	AWW1022	AWW1022
	2..SUS CLAMP 2 ASSY	AWW1023	AWW1023	AWW1023
	1..43 Y DRIVE ASSY	AWV2256	AWV2256	AWV2256
	⚠ 1..POWER SUPPLY UNIT	AXY1133	AXY1133	AXY1133

MAIN ASSY

AWV2238 and AWV2239 are constructed the same except for the following :

Mark	Symbol and Description	AWV2238	AWV2239
	<b>BOARD IF BLOCK</b>		
	R4007	RS1/16SS0R0J	Not used
	R4008	Not used	RS1/16SS0R0J
	R4012	RS1/16SS101J	Not used
	CN4004 50P CONNECTOR	AKM1201	Not used
	CN4005 40P CONNECTOR	AKM1217	Not used
	<b>AV SW BLOCK</b>		
	Q4817, Q4819	2SC4116	Not used
	Q4822, Q4823	2SA1586	Not used
	C4881	CKSSYF104Z16	Not used
F	C4882, C4883 (10/16)	DCH1165	Not used
	R4942, R4943	RS1/16S182J	Not used

Mark	Symbol and Description	AWV2238	AWV2239
	R4953, R4968 R4954, R4969 R4955, R4956 R4958, R4971 R4957, R4970	RS1/16SS101J RS1/16S470J RS1/16S102J RS1/16SS102J RS1/16SS104J	Not used Not used Not used Not used Not used
	<b>IFUCOM BLOCK</b> Q5005 R5076 R5079	DTA124EUA RS1/16SS202J RS1/16SS0R0J	Not used Not used Not used
	<b>MAINUCOM BLOCK</b> IC5204 C5210 R5231, R5243 R5251	TC74VHC125FTS1 CKSSYF104Z16 RS1/16SS103J Not used	Not used Not used Not used RS1/16SS103J

Mark No.	Description	Part No.	Mark No.	Description	Part No.
<b>R06 D-TUNER ASSY (436SX model only)</b>					
<b>[TUNER BLOCK]</b>			<b>[DEMUX BLOCK]</b>		
<b><u>SEMICONDUCTORS</u></b>			<b><u>SEMICONDUCTORS</u></b>		
	IC1001	STV0361L		IC2001	SN74LVU04APW
	IC1000	UPC3221GV		IC2000	STI5517DWAL
	Q1001	2SC2412K		IC2002	TC74VHC08FTS1
	Q1002	DTC124EUA		Q2000	2SC4081
	Q1003,Q1004	RK7002		D2000	DA204U
	D1001	1SS355		D2002	HVU307
	⚠ D1000	SM15T6V8A		D2005,D2009	RB501V-40
<b><u>COILS AND FILTERS</u></b>				D2001	UDZS8R2(B)
	L1002	LCYAR82J2520		VA2002	AVR-M1608C120MT2AB
	F1001,F1003-F1010 FERRITE BEAD	VTF1091	<b><u>COILS AND FILTERS</u></b>		
	F1012-F1014 FERRITE BEAD	VTF1091		F2000-F2003 FERRITE BEAD	VTF1091
	F1100,F1101 FERRITE BEAD	VTF1091		L2000 CHIP FERRITE BEAD	XTX1003
	F1202-F1204 FERRITE BEAD	VTF1091	<b><u>CAPACITORS</u></b>		
	F1000 SAW FILTER	XTF1002		C2014,C2016	CCSRCH100D50
	L1200 CHIP FERRITE BEAD	XTX1001		C2000,C2026,C2030	CCSRCH101J50
	L1004 CHIP FERRITE BEAD	XTX1003		C2009	CCSRCH330J50
	L1000 CHIP BALUN TRANS	XTX1005		C2011,C2012	CCSRCH390J50
<b><u>CAPACITORS</u></b>				C2007	CCSRCH471J50
	C1054	BCG1050		C2032-C2034,C2036	CEHVKW470M16
	C1028,C1038,C1042,C1046,C1051	CCG1205		C2008,C2017,C2020,C2021	CKSRYB102K50
	C1043,C1044	CCSRCJ3R0C50		C2013	CKSRYB105K10
	C1020	CEHVKW100M16		C2001	CKSRYB471K50
	C1019	CEHVKW100M50		C2002,C2003,C2005,C2006	CKSRYF104Z16
	C1004,C1055	CEHVKW101M6R3		C2018,C2019,C2022-C2025,C2028	CKSRYF104Z16
	C1010	CEHVKW2R2M50		C2035,C2037-C2041,C2043-C2045	CKSRYF104Z16
	C1102	CEHVKW331M6R3		C2047,C2048	CKSRYF104Z16
	C1018,C1027,C1029,C1050	CEHVKW470M16		C2015	CKSRYF105Z10
	C1056,C1057	CEHVKW470M16		C2027,C2029,C2042,C2046	CKSRYF223Z50
	C1015	CKSRYB102K50		C2004	CKSRYF474Z16
	C1013,C1021,C1040,C1041,C1045	CKSRYB103K50	<b><u>RESISTORS</u></b>		
	C1001-C1003,C1017,C1022	CKSRYB104K16		R2010,R2018,R2042	RAB4C103J
	C1025,C1026,C1030-C1035,C1037	CKSRYB104K16		R2070,R2071	RAB4CQ220J
	C1039,C1049,C1053,C1058-C1062	CKSRYB104K16		Other Resistors	RS1/16S###J
	C1036	CKSRYB105K10	<b><u>OTHERS</u></b>		
<b><u>RESISTORS</u></b>				X2001 CRYSTAL	ASS1172
	All Resistors	RS1/16S###J		X2000 CRYSTAL (27MHz)	BSS1112
<b><u>OTHERS</u></b>					
	⚠ FU1200 CHIP FUSE (0.25A)	XEK1003			
	X1100 CRYSTAL (27MHz)	XSS1010			

**Mark No. Description****Part No.****Mark No. Description****Part No.****[MEMORY BLOCK]  
SEMICONDUCTORS**

IC3000,IC3003

K4S281632F-UC75

**CAPACITORS**

C5005,C5100

C5001

C5003,C5004,C5006,C5008-C5013

CEHVKW470M16

CKSRYB105K10

CKSRYF104Z16

**COILS AND FILTERS**

L3005 CHIP FERRITE BEAD

XTX1001

L3003 CHIP FERRITE BEAD

XTX1003

**RESISTORS**

R5014,R5019,R5022,R5024,R5030

R5032,R5036-R5038,R5045-R5050

Other Resistors

RAB4CQ470J

RAB4CQ470J

RS1/16S###J

**OTHERS**

CN5000 PCMCIA CONNECTOR

XKP1003

**[POWER BLOCK]  
SEMICONDUCTORS**

IC6002

IC6003

IC6001

IC6200

Q6006

BA05FP

FPF2002

M5291FP

TC74LCX245FTS1

2SB1188

Q6100

Q6003,Q6005,Q6010

Q6001,Q6009,Q6011,Q6200

Q6008

D6003,D6100-D6102

2SC4081

DTA143EUA

DTC124EUA

TPC8209

1SS355

D6001

D6103

RSX201L-30

UDZS30(B)

**COILS AND FILTERS**

L6000

F6000 CHIP FERRITE BEAD

L6001,L6100,L6101

CHIP INDUCTOR (33UH)

LCYAR82J2520

VTF1091

XTH1001

**CAPACITORS**

C6027

C6010

C6004

C6017,C6028,C6036,C6042,C6044

C6031

CCSRCH101J50

CCSRCH331J50

CEHVKW100M50

CEHVKW101M6R3

CEHVKW2R2M50

C6000,C6026,C6104-C6106

C6001,C6011,C6013-C6015,C6019

C6023,C6100

C6022

C6003,C6005,C6006,C6012,C6018

CEHVKW331M6R3

CEHVKW470M16

CEHVKW470M16

CKSRYB105K10

CKSRYF104Z16

C6020,C6021,C6025,C6029,C6030

C6033,C6038,C6102,C6200

C6002,C6035

C6008,C6016

CKSRYF104Z16

CKSRYF104Z16

CKSRYF223Z50

CKSRYF474Z16

**RESISTORS**

R6031

R6012-R6014

R6204,R6205

Other Resistors

RAB4C221J

RAB4C2R2J

RAB4CQ101J

RS1/16S###J

**OTHERS**

CN6003 50P CONNECTOR

CN6000 PHP CONNECTOR 12P

AKM1236

AKM1298

**[AV BLOCK]****SEMICONDUCTORS**

IC4000

IC4003

IC4100

IC4002

IC4001

Q4001,Q4002

CS4334-KS

CS8406CZZ

PCM1803DB

RC4558D

SN74LVU04APW

2SC4081

**COILS AND FILTERS**

F4000,F4100 CHIP FERRITE BEAD

VTF1091

**CAPACITORS**

C4000,C4002

C4010,C4011,C4042

C4008,C4009

C4007,C4013

C4019,C4102-C4104,C4108-C4113

CCG1205

CCSRCH101J50

CCSRCH121J50

CCSRCH220J50

CEHVKW100M16

C4004

C4012,C4022,C4023,C4029,C4039

C4006

C4001,C4014,C4032,C4033,C4038

C4040,C4041

CEHVKW2R2M50

CEHVKW470M16

CKSRYB102K50

CKSRYB103K50

CKSRYB105K10

C4003,C4005,C4017,C4018,C4021

C4024,C4043,C4105-C4107

CKSRYF104Z16

CKSRYF104Z16

**RESISTORS**

R4042,R4045,R4046

Other Resistors

RS1/16S2000F

RS1/16S###J

**OTHERS**

CN4000 40P CONNECTOR

JA4000 OPTICAL OUT MODULE

X4000 CRYSTAL (12.288MHz)

AKM1217

GP1FM513TZ

XSS1006

**[COMMON-INTERFACE BLOCK]  
SEMICONDUCTORS**

IC5001

IC5000

IC5002

IC5003,IC5004

Q5000

CIMAXSP2L

ST890CDR

TC74LCX245FTS1

TC74LCX373FT

2SC4081

Q5001

Q5002

DTA143EUA

DTC124EUA

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
<b>[PC CARD BLOCK]</b>		
<b><u>SEMICONDUCTORS</u></b>		
IC3002		XYW1005
<b><u>OTHERS</u></b>		
16-18 SCREW		ABZ30P060FTC
11 PCMCIA EJECTOR		ANG2673
12-15 SCREW		PMZ20P100FNI
9 TOP CAN		XNG1002

## OBE MAIN ASSY (436SXE model)

<b>[BOARDIF BLOCK]</b> <b><u>SEMICONDUCTORS</u></b>				
IC4003-IC4005, IC4007 Q4001, Q4010			TC74VCX541FT DTC124EUA	

## CAPACITORS

C4036	CCSRCH101J50
C4012	CCSSCH101J50
C4001, C4002, C4051, C4063	CKSRYB105K6R3
C4003-C4006	CKSRYB221K50
C4011, C4013-C4015	CKSSYF104Z16

## RESISTORS

R4028, R4029, R4032-R4037	RAB4CQ220J
R4040-R4043, R4047, R4051	RAB4CQ220J
R4009-R4011	RS1/10S0R0J
R4050, R4052, R4058, R4061-R4064	RS1/16S###J
R4102, R4105, R4107, R4110-R4113	RS1/16S###J
Other Resistors	RS1/16SS###J

## OTHERS

CN4004	50P CONNECTER	AKM1201
CN4001, CN4005	40P CONNECTER	AKM1217
CN4009, CN4028	CONNECTOR	AKM1274
CN4027	CONNECTOR	AKM1279
CN4011	50P CONNECTER	AKM1345

**[REG BLOCK]  
SEMICONDUCTORS**

IC4212, IC4214	BD6522F
IC4211, IC4213	MM1661JH
IC4202	NCP1117ST15
IC4209	NCP1117ST18
IC4201	PQ025ENA1ZPH
IC4204, IC4205	PQ033ENA1ZPH
IC4206	PQ050DNA1ZPH
IC4203	PQ090DNA1ZPH
Q4201	DTC124EUA
D4201-D4206, D4209, D4211, D4212	1SS355

## COILS AND FILTERS

L4201	INDUCTOR	BTH1111
⚠ L4204-L4206	CHIP BEADS FILTER	BTX1042
⚠ F4201-F4203, F4205, F4207	EMI FILTER	CCG1162

## CAPACITORS

C4201, C4206, C4209, C4215, C4220	ACG7046
C4240, C4250, C4253, C4255, C4264	ACG7046
(10/6.3)	
C4210, C4244, C4269 (4700/63)	ACH1429
C4259	CCSRCH471J50
C4205, C4219, C4224, C4228	CEHVKW101M6R3
C4226	CEHVKW220M16

<b><u>Mark No.</u></b>	<b><u>Description</u></b>	<b><u>Part No.</u></b>
C4213, C4234		CEHVKW470M16
C4214		CKSRYB104K16
C4203, C4217, C4223		CKSRYB105K10
C4266		CKSRYB471K50
C4229, C4252		CKSSYB104K10
C4232		CKSSYB471K50
C4204, C4212, C4227, C4251, C4256		CKSSYF104Z16
C4258, C4261, C4262, C4265, C7267		CKSSYF104Z16
C4211, C4225 (10/16)		DCH1165

## RESISTORS

R4221, R4226	RS1/10S0R0J
R4228-R4231	RS1/16S###J
Other Resistors	RS1/16SS###J

**[TUNER IF BLOCK]  
SEMICONDUCTORS**

Q4404	2SA1586
Q4401, Q4402	2SC4116
Q4414	DTA124EUA
Q4413	DTC124EUA
Q4405	HN1B04FU
D4401	UDZS33(B)

## CAPACITORS

C4416, C4459 (10/6.3)	ACG7046
C4420	CKSRYB332K50
C4401, C4402	CKSRYF104Z50

## RESISTORS

R4401, R4416, R4419, R4452, R4460	RS1/16S###J
Other Resistors	RS1/16SS###J

## OTHERS

CN4401	40P CONNECTER	AKM1217
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[AV IO BLOCK]  
SEMICONDUCTORS

Q4614, Q4615, Q4626, Q4639	2SA1586
Q4641, Q4642, Q4645, Q4646	2SA1586
Q4602-Q4605, Q4607, Q4608	2SC4116
Q4618-Q4620, Q4622-Q4624, Q4629	2SC4116
Q4632-Q4636, Q4643	2SC4116
Q4611, Q4612	2SD2114K
Q4606, Q4616, Q4621, Q4631	DTA124EUA
Q4610	DTA143EUA
Q4613, Q4617	DTC124EUA
Q4601, Q4609, Q4625, Q4630	HN1A01FU
Q4644	HN1C01FU
D4602, D4607, D4611, D4621	1SS301
D4631-D4633	1SS302
D4606, D4626	1SS355

## COILS AND FILTERS

L4602, L4604, L4606, L4608	LCTAW1R0J2520
L4611, L4612	LCTAW1R0J2520
L4601, L4603, L4605, L4607	LCTAW560J2520
L4609, L4610	LCTAW560J2520

## CAPACITORS

C4601, C4605, C4620, C4621, C4634	ACG7046
C4636	(10/6.3) ACG7046
C4602, C4623, C4635, C4639, C4640	ACH1368
C4644	(220/10) ACH1368



Mark No.	Description	Part No.
	C4607, C4611, C4617, C4619, C4624	CCG1205
A	C4628, C4643, C4649 (2.2/10)	CCG1205
	C4618	CEHAT471M10
	C4606, C4608, C4609, C4612	CKSRYB105K10
	C4615, C4616, C4626, C4629	CKSRYB105K10
	C4631-C4633, C4641, C4642	CKSRYB105K10
	C4645, C4646, C4650, C4652-C4654	CKSRYB105K10
	C4661-C4663	CKSRYB105K10
	C4610, C4613, C4627, C4630	CKSSYB102K50
	C4647, C4648	CKSSYB102K50
	⚠ C4671-C4676	CKSSYB102K50
B	C4604, C4614, C4622, C4637, C4651	CKSSYF104Z16
	C4603, C4625, C4638 (10/16)	DCH1165

### RESISTORS

R4608, R4670, R4696	RS1/10S121J
R4601, R4644, R4645, R4658, R4686	RS1/10S151J
R4734, R4735	RS1/10S151J
R4630-R4632, R4643, R4675, R4681	RS1/16S75R0F
R4715-R4717, R4733, R4740-R4742	RS1/16S75R0F

R4602, R4603, R4605, R4610-R4612	RS1/16S###J
R4614-R4616, R4621-R4623, R4626	RS1/16S###J
R4635, R4636, R4639-R4641, R4646	RS1/16S###J
R4648-R4650, R4656, R4657, R4660	RS1/16S###J
R4661, R4662, R4664, R4665, R4667	RS1/16S###J

R4668, R4672, R4684, R4685, R4690	RS1/16S###J
R4691, R4693, R4694, R4697-R4699	RS1/16S###J
R4709-R4711, R4721, R4736, R4737	RS1/16S###J
R4738, R4739	RS1/16S###J
Other Resistors	RS1/16SS###J

### OTHERS

JA4604 2P VERTICAL PIN JACK	AKB1331
JA4605 PINJACK	AKB1333
JA4601-JA4603 RGB CONNECTOR	AKP1295

### [AV SW BLOCK] SEMICONDUCTORS

IC4805	NJM12904V
IC4806	R2S11001FT
IC4804	R2S11002FT
Q4801, Q4802, Q4804-Q4806, Q4809	2SA1586
Q4818, Q4820, Q4822, Q4823	2SA1586

Q4812, Q4813, Q4817, Q4819	2SC4116
Q4814	DTA124EUA
Q4815	DTC124EUA
Q4807	HN1B04FU
D4802	1SS301

D4801	1SS355
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### CAPACITORS

C4916 (4.7/10)	ACG1122
C4821, C4835, C4871, C4875 (10/6.3)	ACG7046
C4877, C4880	CCSRCH181J50
C4859	CCSRCH331J50
C4861	CCSRCH680J50

C4885, C4888	CCSRCH681J50
C4822, C4862	CEHVKW101M6R3
C4802, C4805, C4806, C4808	CKSRYB105K10
C4813, C4814, C4820, C4833, C4834	CKSRYB105K10
C4836, C4838-C4841, C4847, C4848	CKSRYB105K10

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
C4850, C4851, C4878, C4879		CKSRYB105K10
C4899-C4905		CKSRYB105K10
C4837		CKSRYB474K10
C4853-C4858, C4860, C4865		CKSSYB103K16
C4869, C4870, C4890-C4893		CKSSYB103K16
C4950-C4954		CKSSYB103K16
C4807, C4809		CKSSYB104K10
C4801, C4819, C4845, C4846, C4864		CKSSYF104Z16
C4873, C4881, C4884, C4886, C4887		CKSSYF104Z16
C4917-C4920, C4924, C4925		CKSSYF104Z16
C4844, C4863, C4866, C4872, C4876		DCH1165
C4882, C4883	(10/16)	DCH1165

### RESISTORS

R4784, R4786	RS1/16S1800F
R4785, R4787, R4792, R4794, R4796	RS1/16S5600F
R4791, R4793, R4795	RS1/16S75R0F
R4857-R4860, R4944, R4985	RS1/16SS3301F
R4921, R4925-R4927, R4933, R4942	RS1/16S####J

R4943, R4950, R4954-R4956, R4965	RS1/16S####J
R4966, R4967, R4969	RS1/16S####J
Other Resistors	RS1/16SS####J

### [IFUCOM BLOCK] SEMICONDUCTORS

IC5002	HD64F3684FP
IC5003	PST9230N
IC5001	TC74VHC08FTS1
IC5004	TC7W126FU
Q5005	DTA124EUA

### CAPACITORS

C5007, C5008	CCSSCH180J50
C5001	CEHVKW101M6R3
C5010	CKSSYB472K25
C5002-C5005, C5009, C5012	CKSSYF104Z16

### RESISTORS

R5002, R5004, R5025, R5026	RAB4CQ103J
Other Resistors	RS1/16SS####J

### OTHERS

X5002 (9.830MHz) CERAMIC	ASS1168
X5001 (32.768kHz) CRYSTAL	ASS1172

### [MAINUCOM BLOCK] SEMICONDUCTORS

IC5202	BR24L64F-W
IC5206	MB91305PMC-G-BND
IC5207	MBM29DL162TE70TN
IC5209	PQ200WNA1ZPH
IC5213	PST3610UR

IC5212	PST3616UR
IC5203, IC5211	PST3628UR
IC5201, IC5204	TC74VHC125FTS1
Q5202	2SJ461A
Q5204	DTC124EUA

Q5201, Q5203	SM6K2
D5203	1SS355
D5201	SML-311UT

### CAPACITORS

C5235	CCSRCH221J50
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5	6	7	8	
Mark No.	Description	Part No.	Mark No.	Description
C5244, C5245	CCSSCH120J50	Other Resistors	RS1/16SS###J	
C5217, C5218, C5240, C5241	CCSSCH470J50			
C5246-C5251	CCSSCH470J50	<b>OTHERS</b>		
C5238	CEHVKW100M35	X5401 (6.000MHz) CRYSTAL	ASS1193	A
C5201	CEHVKW101M6R3			
C5256, C5263	CKSSYB102K50	<b>[VDEC BLOCK]</b>		
C5216, C5233	CKSSYB103K16	<b>SEMICONDUCTORS</b>		
C5215	CKSSYB472K25	IC6002	HY57V161610ETP-8	
C5202-C5214, C5219, C5222-C5232	CKSSYF104Z16	IC6003	UPD64015AGM-UEU	
C5234, C5254, C5255, C5257-C5260	CKSSYF104Z16	<b>COILS AND FILTERS</b>		
C5236 (10/16)	DCH1165	⚠ F6001, F6002, F6010, F6011 EMI FILTER	CCG1162	
<b>RESISTORS</b>		<b>CAPACITORS</b>		
R5262, R5268 (330/1/16W)	ACN1248	C6056, C6088 (10/6.3)	ACG7046	B
R5205, R5213	RAB4CQ101J	C6078, C6083	CCSSCH8R0D50	
R5283	RS1/16S1601F	C6062, C6069, C6070, C6074, C6080	CKSSYB103K16	
R5282	RS1/16S3301F	C6046, C6058, C6063, C6064	CKSSYB104K10	
R5273	RS1/16S8201F	C6066, C6067, C6072, C6073	CKSSYB104K10	
R5246, R5248, R5249,	RS1/16S###J	C6075-C6077, C6081, C6082	CKSSYB104K10	
R4943, R4950, R4954-R4956, R4965	RS1/16S###J	C6084, C6085	CKSSYB104K10	
Other Resistors	RS1/16SS###J	C6001-C6008, C6012-C6028	CKSSYF104Z16	
<b>OTHERS</b>		C6031-C6045, C6047, C6048, C6065	CKSSYF104Z16	
CN5202 50P CONNECTER	AKM1201	C6068, C6071, C6079	CKSSYF104Z16	
K5201, K5202 TEST PIN	AKX9002	<b>RESISTORS</b>		
X5201 (16MHz) CERAMIC	ASS1178	R6010, R6068, R6072 (22/1/16W)	ACN1246	C
<b>[TEXTUCOM BLOCK]</b>		R6065, R6073 (47/1/16W)	BCN1067	
<b>SEMICONDUCTORS</b>		R6007, R6030, R6071	RAB4CQ220J	
IC5403	K4S641632H-TC75	R6063	RS1/16SS1001D	
IC5404	S29AL016D70TFI010	R6038, R6039, R6049	RS1/16SS2000F	
IC5405	SDA6000	R6054	RS1/16SS2201D	
IC5407	TC74LCX541FTS1	R6052	RS1/16SS6200D	
IC5402	TC7SH04FUS1	R6003, R6009, R6011, R6046, R6047	RS1/16S###J	
IC5406	TC7W126FU	R6066, R6067	RS1/16S###J	
Q5401, Q5406	DTA124EUA	Other Resistors	RS1/16SS###J	
Q5403, Q5407	DTC124EUA	<b>OTHERS</b>		
D5404	1SS355	X6002 (24.576MHz) CRYSTAL	ASS1191	D
D5401	UDZS12(B)	<b>[ADC BLOCK]</b>		
D5402	UDZS3R0(B)	<b>SEMICONDUCTORS</b>		
D5403	UDZS3R9(B)	IC6201	AD9985KSTZ-110	
<b>COILS AND FILTERS</b>		<b>COILS AND FILTERS</b>		
⚠ F5402, F5403 EMI FILTER	CCG1162	⚠ F6201, F6204 EMI FILTER	CCG1162	
<b>CAPACITORS</b>		<b>CAPACITORS</b>		
C5412, C5438, C5453 (10/6.3)	ACG7046	C6205, C6209	CKSSYB104K10	E
C5422, C5423	CCSSCH200J50	C6207, C6210, C6218	CKSSYB473K16	
C5404	CKSSYB102K50	C6202	CKSSYB822K16	
C5403	CKSSYB103K16	C6201	CKSSYB823K10	
C5445	CKSSYB104K10	C6203, C6204, C6206, C6208	CKSSYF104Z16	
C5405, C5406, C5408, C5410, C5413	CKSSYF104Z16	C6211, C6212, C6215-C6217	CKSSYF104Z16	
C5416, C5418, C5420, C5425, C5427	CKSSYF104Z16	C6222-C6224	CKSSYF104Z16	
C5429-C5431, C5434, C5435, C5440	CKSSYF104Z16	<b>RESISTORS</b>		
C5442, C5446, C5449, C5451, C5454	CKSSYF104Z16	R6213, R6218, R6223 (47/1/16W)	BCN1067	
C5456, C5458, C5460, C5476	CKSSYF104Z16	R6202	RS1/16SS2701F	
<b>RESISTORS</b>		R6220	RS1/16S0R0J	
R5409, R5432 (68/1/16W)	ACN1251	Other Resistors	RS1/16SS###J	F
R5404, R5428, R5429, R5434, R5435	BCN1067			
(47/1/16W)				
R5439, R5457, R5476	RAB4CQ103J			
R5460	RAB4CQ680J			

**Mark No. Description****Part No.****Mark No. Description****Part No.****[HDMI BLOCK]  
SEMICONDUCTORS**IC6403  
IC6405  
IC6404  
Q6416  
Q6414BR24L02FJ-W  
PCM1754DBQ  
SII9021CTU  
2SA1586  
DTA124EUAQ6415  
Q6405  
Q6404  
D6408  
D6407DTC124EUA  
HN1K02FU  
RN1902  
DAN202U  
UDZS6R8(B)**COILS AND FILTERS**

△ F6401 EMI FILTER

CCG1162

**CAPACITORS**C6491 (10/6.3)  
C6401, C6403, C6405, C6407, C6409  
C6419, C6426, C6428, C6430, C6432  
C6434, C6435, C6438, C6440, C6442  
C6444, C6446, C6448, C6449, C6454ACG7046  
CCSSCH101J50  
CCSSCH101J50  
CCSSCH101J50  
CCSSCH101J50C6456, C6459, C6464, C6466, C6468  
C6470, C6472, C6474, C6476, C6478  
C6480, C6482  
C6462, C6463  
C6484CCSSCH101J50  
CCSSCH101J50  
CCSSCH101J50  
CCSSCH120J50  
CEHVKW220M6R3C6402, C6404, C6406, C6408, C6410  
C6412, C6414, C6416, C6418, C6420  
C6422, C6423, C6427, C6429, C6431  
C6433, C6436, C6437, C6439, C6441  
C6443, C6445, C6447, C6450, C6451CKSSYF104Z16  
CKSSYF104Z16  
CKSSYF104Z16  
CKSSYF104Z16  
CKSSYF104Z16C6455, C6457, C6458, C6460, C6461  
C6465, C6467, C6469, C6471, C6473  
C6475, C6477, C6479, C6481, C6483  
C6490CKSSYF104Z16  
CKSSYF104Z16  
CKSSYF104Z16  
CKSSYF104Z16**RESISTORS**R6418, R6419, R6421 (22/1/16W)  
R6414  
R6465  
R6416  
R6438ACN1246  
RAB4CQ100J  
RAB4CQ103J  
RAB4CQ220J  
RAB4CQ470JR6401, R6449  
R6417  
Other ResistorsRS1/10S0R0J  
RS1/16S220J  
RS1/16SS###J**OTHERS**JA6402 HDMI CONNECTOR(VT)  
X6401 (28.322MHz) CRYSTALAKP1294  
ASS1192**[DSEL BLOCK]  
SEMICONDUCTORS**IC6601  
IC6602  
IC6603PD6523A  
TC74LCX125FT  
TC74VHC125FTS1**COILS AND FILTERS**

△ F6628 CHIP BEADS FILTER

△ F6601-F6603 EMI FILTER

ATX1058  
CCG1162**CAPACITORS**C6632 (10/6.3)  
C6604ACG7046  
CCSRCH221J50

C6631

C6601-C6603, C6606-C6610  
C6613-C6617, C6619, C6621-C6623CKSSYB102K50  
CKSSYF104Z16  
CKSSYF104Z16

C6625-C6627, C6629, C6630

CKSSYF104Z16

**RESISTORS**R6603-R6605 (68/1/16W)  
R6611, R6614, R6618, R6653-R6655  
(100/1/16W)ACN1251  
BCN1071R6613, R6620, R6652  
R6648, R6651  
Other ResistorsRAB4CQ101J  
RS1/16S###J  
RS1/16SS###J**OTHERS**

X6601 (100MHz) CRYSTAL

ASS1194

**[IP BLOCK]  
SEMICONDUCTORS**IC6801, IC6802  
IC6803K4S643232H-TC60  
PE5504B**COILS AND FILTERS**

△ L6801-L6804 CHIP BEADS FILTER

BTX1042

**CAPACITORS**C6801 (10/6.3)  
C6863  
C6802-C6809, C6811-C6822  
C6824-C6831, C6833-C6862ACG7046  
CKSSYB102K50  
CKSSYF104Z16  
CKSSYF104Z16**RESISTORS**R6833, R6838 (22/1/16W)  
R6841, R6844-R6847 (68/1/16W)  
R6813, R6814, R6816, R6820, R6821  
R6823, R6825, R6827, R6828 (47/1/16W)  
R6818 (100/1/16W)ACN1246  
ACN1251  
BCN1067  
BCN1067  
BCN1071

R6832

RAB4CQ101J

R6817

RAB4CQ470J

Other Resistors

RS1/16SS###J

**[MULTI BLOCK]  
SEMICONDUCTORS**IC7001  
IC7002  
IC7004  
IC7005PEG121B  
S29JL032H70TFI21  
TC74VHC08FTS1  
TC74VHC125FTS1**COILS AND FILTERS**

△ F7001-F7005 EMI FILTER

CCG1162

**CAPACITORS**C7052  
C7006-C7021, C7023-C7034  
C7036-C7050, C7054CKSSYB102K50  
CKSSYF104Z16  
CKSSYF104Z16**RESISTORS**R7011, R7013, R7024, R7032, R7036  
(22/1/16W)

ACN1246

R7062-R7064 (47/1/16W)

BCN1067

R7015, R7023  
R7016, R7018, R7070  
R7060RAB4CQ101J  
RAB4CQ103J  
RAB4CQ470J

Other Resistors

RS1/16SS###J



5  
**Mark No. Description**

6  
**Part No.**

**AUDIO ASSY**  
**SEMICONDUCTORS**

IC3754  
IC3751  
IC3753  
IC3752  
Q3751, Q3754, Q3755, Q3757  
  
Q3756, Q3759  
Q3758, Q3760  
D3751

BR24L02FJ-W  
LA4625  
NJW1183GK1  
PQ09DZ11  
2SA1586  
  
2SC4116  
DTC124EUA  
1SS355

**COILS AND FILTERS**

⚠ L3901, L3902 LINE FILTER

ATF1206

**CAPACITORS**

C3917, C3918 (1.5/63)  
C3756 (1/25)  
C3765, C3768  
⚠ C3906, C3908, C3914, C3916  
C3901, C3902, C3909, C3910  
  
C3775, C3777, C3788, C3790, C3791  
C3799  
C3761, C3764, C3786, C3798  
C3766, C3780, C3783-C3785, C3797  
C3808, C3812, C3814  
  
C3762  
C3752, C3753  
C3759  
C3757  
C3755  
  
C3763  
C3754, C3805  
C3767, C3770, C3772-C3774  
C3781, C3782, C3789, C3792-C3795  
C3806, C3807, C3813  
  
C3811  
C3778  
C3758, C3760, C3796  
C3769, C3815  
C3903, C3911  
  
C3779  
C3816  
C3904, C3912

ACH1420  
BCG1060  
CCSRCH101J50  
CCSRCH101J50  
CCSRCH221J50  
  
CEHAT100M50  
CEHAT100M50  
CEHAT101M16  
CEHAT1R0M50  
CEHAT1R0M50  
  
CEHAT220M50  
CEHAT2R2M50  
CEHAT331M16  
CEHAT471M25  
CEHAT472M25  
  
CEHAT4R7M50  
CFTLA103J50  
CFTLA104J50  
CFTLA104J50  
CFTLA104J50  
  
CFTLA223J50  
CFTLA334J50  
CKSRYB103K50  
CKSRYB222K50  
CKSRYB332K50  
  
CKSRYB822K50  
CKSRYF104Z16  
CKSRYF473Z50

**RESISTORS**

R3901-R3904  
R3768-R3770, R3782  
Other Resistors

RD1/2MMF100J  
RD1/2MMF2R2J  
RS1/16S###J

**OTHERS**

CN3751 CONNECTOR  
CN3901 8P TOP POST  
3772, 3773 SCREW  
3774, 3775 SCREW  
KN3751, KN3752 WRAPPING TERMINAL

B3P-VH  
B8B-EH  
PMB30P100FNI  
VBB30P100FNI  
VNF1084

**SR ASSY**  
**SEMICONDUCTORS**

IC7601  
Q7608

MAX3232CPW  
HN1B04FU

7  
**Mark No. Description**

TH7601

**CAPACITORS**

C7608  
C7601  
C7603-C7607, C7614

**RESISTORS**

R7626  
R7602-R7605  
Other Resistors

**OTHERS**

CN7602 9P D-SUB SOCKET  
7602 SCREW TERMINAL

8  
**Part No.**

TH05-3H103F

CEHVKW100M16  
CKSRYB103K50  
CKSSYF104Z16

RS1/16S4701F  
RS1/16S###J  
RS1/16S###J

AKP1213  
VNE1949

**TUNER ASSY**  
**SEMICONDUCTORS**

IC4401  
Q4402  
Q4410, Q4415  
Q4407, Q4408  
Q4409

MSP3417G  
2SC4116  
DTC124EUA  
HN1A01FU  
HN1C01FU

D4403

UDZS8R2(B)

**COILS AND FILTERS**

L4401-L4403 CHIP COIL  
L4405, L4406  
L4407  
L4404  
F4401, F4402

BTH1119  
LCTAW150J2520  
LCTAW4R7J2520  
LCTAW8R2J2520  
VTF1080

**SWITCHES AND RELAYS**

S4401

ASG1100

**CAPACITORS**

C4404, C4407, C4415, C4429 (10/6.3)  
C4424 (3.3/50)  
C4449  
C4442  
C4417, C4418  
  
C4450  
C4456  
C4448  
C4428, C4443  
C4441

ACG7046  
ACH1385  
CCSRCH680J50  
CCSRCJ3R0C50  
CCSSCH100D50  
  
CCSSCH121J50  
CCSSCH181J50  
CCSSCH470J50  
CCSSCH560J50  
CCSSCH5R0D50

C4409, C4423  
C4421  
C4422  
C4411, C4413  
C4403, C4406, C4410, C4430, C4440

CEHVKW100M16  
CEHVKW101M6R3  
CEHVKW470M16  
CKSRYF104Z50  
CKSSYB102K50

C4444, C4455, C4461  
C4408, C4439, C4446  
C4438, C4454  
C4402, C4405, C4425, C4426, C4432  
C4434, C4435, C4447, C4451, C4460

CKSSYB102K50  
CKSSYB103K16  
CKSSYB472K25  
CKSSYF104Z16  
CKSSYF104Z16

C4465  
C4414, C4437, C4445 (10/16)

CKSSYF104Z16  
DCH1165

**RESISTORS**

R4407-R4409, R4431, R4441, R4443  
R4446, R4451, R4455-R4457, R4461  
R4462

RS1/16S###J  
RS1/16S###J  
RS1/16S###J

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**Mark No. Description****Part No.**

Other Resistors

RS1/16SS###J

**OTHERS**CN4401 40P CONNECTER  
X4401 CRYSTAL(18.432MHZ)AKM1217  
ASS1196**FRONT ASSY****SEMICONDUCTORS**D7801-D7803  
D7804, D7805UDZS5R1(B)  
UDZS9R1(B)**COILS AND FILTERS**

L7801, L7802

LCTAW1R0J2520

**CAPACITORS**C7803, C7804  
C7805, C7808, C7809, C7813  
C7801  
⚠ C7839, C7840  
C7802CKSRYB103K50  
CKSRYB105K10  
CKSRYB473K16  
CKSSYB102K50  
CKSSYF104Z16**RESISTORS**R7801, R7803, R7809  
R7802, R7863, R7867RS1/16S75R0F  
RS1/16SS###J**OTHERS**JA7803 PIN JACK(3P)  
CN7804 40P CONNECTER  
JA7801 4P MINIDIN SOCKET(S)AKB1303  
AKM1217  
AKP1238**LED ASSY****SEMICONDUCTORS**Q8002, Q8003  
Q8004, Q8005  
Q8001  
D8001, D8002  
D8003DTA143EUA  
DTC143EUA  
RN2902  
SML-310DT  
SML-311UT

D8004

SML512BC4T

**CAPACITORS**C8002-C8007, C8009  
C8001, C8008CCSSCH101J50  
CKSSYF104Z16**RESISTORS**R8002, R8018  
Other ResistorsRS1/16SS###J  
RS1/16S###J**IR ASSY****SEMICONDUCTORS**Q8401  
D84012SA1586  
1SS302**CAPACITORS**C8401 (47/6.3)  
C8402  
C8403  
C8404ACH1357  
CKSRYB103K50  
CKSSYB102K50  
CKSSYF104Z16**RESISTORS**R8401, R8403, R8404  
Other ResistorsRS1/16SS###J  
RS1/16S###J**Mark No. Description****Part No.****OTHERS**

CN8401 L-PLUG(3P)

KM200NA3L

**KEY ASSY****SWITCHES AND RELAYS**

S8451-S8456

VSG1024

**CAPACITORS**

C8451-C8453

CCSRCH101J50

**RESISTORS**

Other Resistors

RS1/16S###J

**PANEL SENSOR ASSY****SEMICONDUCTORS**Q8602  
TH8601HN1B04FU  
TH05-3H103F**CAPACITORS**

C8606, C8607

CKSRYB103K50

**RESISTORS**R8607  
Other ResistorsRS1/16S4701F  
RS1/16S###J**SUB POWER ASSY****SEMICONDUCTORS**IC7501, IC7502  
Q7501  
Q7502  
D7502  
D7503M5291FP  
2SD1664  
2SD1898  
D1FL20U(S)  
RB160M-30**COILS AND FILTERS**L7501 INDUCTOR  
L7503 INDUCTORATH1124  
ATH1197**CAPACITORS**C7505 (47/50)  
C7502, C7522 (100/16)  
C7501, C7507  
C7510  
C7504ACH1390  
ACH1394  
CCSRCH221J50  
CCSRCH681J50  
CCSRCH821J50C7520, C7523  
C7518  
C7521  
C7503, C7509  
C7515-C7517, C7519, C7524, C7525CEHAT471M10  
CEHAT471M6R3  
CEHVKW101M6R3  
CKSRYB103K50  
CKSRYB104K16

C7513

CKSRYF104Z50

**RESISTORS**R7510, R7517, R7520 (1.20/1/2W)  
R7501  
R7513  
R7503  
R7514ACN1163  
RS1/10S1R5J  
RS1/16S1001F  
RS1/16S1101F  
RS1/16S3301FR7504  
Other ResistorsRS1/16S3302F  
RS1/16S###J

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5	6	7	8	
Mark No.	Description	Part No.	Mark No.	Description
<b>OB DIGITAL ASSY</b>			<b>CAPACITORS</b>	
<b>[DIGITAL IF BLOCK]</b>				
<b>SEMICONDUCTORS</b>				
Q3001	DTC124EUA		C3311	CCSRCH470J50
			C3317	CCSRCH471J50
			C3315	CKSRYB104K16
			C3304, C3307, C3309	CKSRYB472K50
			C3305, C3310	CKSSYB102K50
			C3301-C3303, C3306, C3308, C3316	CKSSYF104Z16
<b>COILS AND FILTERS</b>			<b>RESISTORS</b>	
F3001-F3003	ATF1213		Other Resistors	RS1/16SS###J
<b>RESISTORS</b>			<b>OTHERS</b>	
R3010-R3015, R3024-R3029	RAB4C101J		<b>[ASTRA BLOCK]</b>	
R3007	RAB4C470J		<b>SEMICONDUCTORS</b>	
Other Resistors	RS1/16SS###J		IC3401	PEG122C
<b>OTHERS</b>			<b>COILS AND FILTERS</b>	
CN3002 CONNECTOR	AKM1294		F3401, F3402 EMI FILTER	CCG1162
CN3001 50P CONNECTER AU	AKM1346		L3401-L3403	QTL1013
<b>[MODULE UCOM BLOCK]</b>			<b>CAPACITORS</b>	
<b>SEMICONDUCTORS</b>				
IC3156	BR24L04FJ-W		C3401, C3402, C3419, C3425	CEHVKW101M6R3
IC3151	M30620FCPGP-U5C		C3403-C3413, C3417, C3418	CKSSYF104Z16
IC3157	M62334FP		C3420-C3424, C3426-C3432	CKSSYF104Z16
IC3155	SN74AHC08PW		C3445-C3452	CKSSYF104Z16
IC3152, IC3153	SN74AHC541PW		<b>RESISTORS</b>	
IC3160	TC74VHC123AFTS1		R3402, R3412	RAB4C101J
IC3159	TC7W126FU		R3405-R3407, R3409, R3410	RAB4C220J
Q3152	2SC4081		R3416, R3417	RAB4C220J
Q3151	2SJ461A		R3425	RS1/16S5601F
D3158, D3159, D3161	1SS355		Other Resistors	RS1/16SS###J
D3153	DA204U		<b>[ADDRESS BLOCK]</b>	
D3151, D3152, D3154, D3155, D3162	DAN202U		<b>SEMICONDUCTORS</b>	
<b>CAPACITORS</b>			D3501, D3502	DAN202U
C3164, C3178, C3179	CCSSCH101J50		<b>CAPACITORS</b>	
C3151, C3169	CEHVKW470M6R3		C3501-C3504	CKSSYB102K50
C3167	CKSRYB103K50		<b>RESISTORS</b>	
C3159, C3171, C3172	CKSRYB105K10		R3521, R3522, R3525	RAB4C101J
C3154	CKSSYB102K50		R3524	RAB4C222J
C3152, C3153, C3155-C3158	CKSSYF104Z16		R3519, R3520	RAB4C472J
C3162, C3163, C3165, C3166, C3168	CKSSYF104Z16		Other Resistors	RS1/16SS###J
C3170, C3176, C3177	CKSSYF104Z16		<b>OTHERS</b>	
<b>RESISTORS</b>			CN3501-CN3504, CN3506	AKM1217
R3160, R3171, R3176	RAB4C101J		40P CONNECTER	
R3174	RAB4C103J		CN3505 CONNECTOR	CKS4914
Other Resistors	RS1/16SS###J		<b>[DIGITAL DD CON BLOCK]</b>	
<b>OTHERS</b>			<b>SEMICONDUCTORS</b>	
CN3151 CONNECTOR	AKM1289		IC3601	BA80BC0WFP
X3151 (16 MHz) CERAMIC	ASS1178		Q3605	DTC124EUA
<b>[PANEL FLASH BLOCK]</b>			<b>CAPACITORS</b>	
<b>SEMICONDUCTORS</b>				
IC3301	MBM29PL160TD75TN		C3612	ACH1394
IC3304	PST3610UR		C3611	CKSQYB105K16
IC3302, IC3305	PST3628UR		C3613	CKSRYB103K50
IC3303	SN74AHC08PW		C3609	CKSSYF104Z16
Q3302	HN1C01FU			
Q3301	RN1901			

**Mark No. Description****Part No.****RESISTORS**

R3611  
R3624, R3626  
Other Resistors

RAB4C101J  
RS1/16S###J  
RS1/16SS###J

**OTHERS**

U3601 DD CON UNIT

AXY1118

**43 ADDRESS ASSY**  
**[43 ADR LOGIC BLOCK]**  
**SEMICONDUCTORS**

IC1501

PEE002A

**COILS AND FILTERS**

L1504 CHIP SOLIDD INDUCTOR

QTL1013

**CAPACITORS**

C1501,C1502  
C1509,C1510  
C1503-C1507,C1552-C1555

CKSRYB105K6R3  
CKSSYB102K50  
CKSSYF104Z16

**RESISTORS**

R1505-R1509  
R1530,R1531  
Other Resistors

RS1/16SS1000F  
RS1/16S0R0J  
RS1/16SS###J

**OTHERS**

CN1501 40P CONNECTOR  
CN1502 PH CONNECTOR 4P

AKM1217  
AKM1290

**[43 ADR RESONANCE BLOCK]**  
**SEMICONDUCTORS**

IC1601,IC1602  
Q1612  
Q1607,Q1609  
Q1601,Q1610  
Q1606,Q1608,Q1611

TND307TD  
2SA1163  
HAT1110R  
HAT3021R  
QSZ2

Q1615  
D1612  
D1625,D1628  
D1602,D1603,D1605,D1606  
D1607-D1610

RN1901  
1SS302  
1SS355  
EC10UA20  
EP05FA20

D1601,D1611,D1620,D1622

UDZS15(B)

**COILS AND FILTERS**

L1601,L1604 INDUCTOR

ATH1135

**CAPACITORS**

C1609 (0.1U/100V)  
C1620,C1621 (330P/100V)  
C1601,C1614 (0.1U/100V)  
C1602,C1604 (56U/80V)  
C1613

ACG1098  
ACG1105  
ACG1124  
ACH1422  
CKSRYB104K25

C1619

CKSYB105K16

**RESISTORS**

R1601,R1617  
Other Resistors  
Other Resistors

RS1/16S4702F  
RS1/16S###J  
RS1/16SS###J

**Mark No. Description****Part No.**
**43 SCAN A ASSY**  
**SEMICONDUCTORS**

IC2701-IC2706  
IC2707  
D2701-D2705

SN755870PZT  
TC7SH08FUS1  
1SS355

**CAPACITORS**

C2701,C2711,C2721 (0.1U/250V)  
C2731,C2741,C2751 (0.1U/250V)  
C2710,C2720,C2730,C2740,C2750  
C2760  
C2708,C2709,C2718,C2719

ACG1088  
ACG1088  
CCSRCH181J50  
CCSRCH181J50  
CCSRCH331J50

C2728,C2729,C2738,C2739  
C2748,C2749,C2758,C2759  
C2705-C2707,C2715-C2717  
C2725-C2727,C2735-C2737  
C2745-C2747,C2755-C2757  
C2703,C2713,C2723,C2733,C2743  
C2753,C2761

CCSRCH331J50  
CCSRCH331J50  
CCSRCH390J50  
CCSRCH390J50  
CCSRCH390J50  
CKSRYB105K6R3  
CKSRYB105K6R3

**RESISTORS**

R2705,R2710,R2713,R2716,R2719  
R2722  
Other Resistors

RAB4C221J  
RAB4C221J  
RS1/16S###J

**OTHERS**

CN2702 PH CONNECTOR 3P  
CN2701 13P BRIDGE CONNECTOR

AKM1274  
AKP1261

**43 SCAN B ASSY**  
**SEMICONDUCTORS**

IC2801-IC2806  
IC2807  
D2801-D2805

SN755870PZT  
TC7SH08FUS1  
1SS355

**CAPACITORS**

C2801,C2811,C2821 (0.1U/250V)  
C2831,C2841,C2851 (0.1U/250V)  
C2810,C2820,C2830,C2840,C2850  
C2860  
C2808,C2809,C2818,C2819

ACG1088  
ACG1088  
CCSRCH181J50  
CCSRCH181J50  
CCSRCH331J50

C2828,C2829,C2838,C2839  
C2848,C2849,C2858,C2859  
C2805-C2807,C2815-C2817  
C2825-C2827,C2835-C2837  
C2845-C2847,C2855-C2857

CCSRCH331J50  
CCSRCH331J50  
CCSRCH390J50  
CCSRCH390J50  
CCSRCH390J50

C2803,C2813,C2823,C2833,C2843  
C2853,C2861

CKSRYB105K6R3  
CKSRYB105K6R3

**RESISTORS**

R2803,R2808,R2811,R2814,R2817  
R2820  
Other Resistors

RAB4C221J  
RAB4C221J  
RS1/16S###J

**OTHERS**

CN2802 PH CONNECTOR 3P  
CN2801 13P BRIDGE CONNECTOR

AKM1274  
AKP1261

**43 X DRIVE ASSY**  
**OTHERS**

1002 DRIVE RADIATION SHEET  
1001 DRIVE HEATSINK X

AEH1092  
ANH1637

5	6	7	8	
Mark No.	Description	Part No.	Mark No.	Description
1002	DRIVE HEATSINK K	ANH1639	D1282	UDZS16(B)
1001	SCREW	BMZ30P080FTC	D1251	UDZS5R6(B)
<b>[X LOGIC BLOCK]</b>				A
<b><u>SEMICONDUCTORS</u></b>				
IC1001	TC74ACT541FT			
IC1002	TC74VHC00FTS1			
<b><u>CAPACITORS</u></b>				
C1003	CEHAT470M16			
C1001,C1002	CKSRYB104K16			
<b><u>RESISTORS</u></b>				
R1001,R1003	RAB4C470J			
R1008,R1009	RAB4C472J			
Other Resistors	RS1/16S###J			B
<b><u>OTHERS</u></b>				
CN1001	18P FFC CONNECTOR	VKN1310		
<b>[X RESONANCE BLOCK]</b>				
<b><u>SEMICONDUCTORS</u></b>				
IC1101	AXF1145			
IC1141	BA10393F			
Q1141	2SC4116			
D1101-D1105	D1FL40			
<b><u>COILS AND FILTERS</u></b>				
L1101,L1102	CHOKE COIL	ATH1155		
L1103-L1106	CHOKE COIL	ATH1193		
<b><u>CAPACITORS</u></b>				
C1106-C1110	ACE1178			
C1101,C1112,C1113 (0.22U/250V)	ACG1112			
C1121 (470P/630V)	ACG1126			
C1167,C1168 (3300P/630V)	ACG1129			
C1105	CCG1186			
C1141,C1142,C1144,C1145	CKSRYB104K16			
C1102,C1146	CKSRYB105K6R3			
C1103	CKSYB105K25			
<b><u>RESISTORS</u></b>				
R1101	ACN1168			
R1142,R1146	RS1/10S1003F			
R1122,R1123	RS1/10S104J			
R1148,R1150	RS1/16S5601F			
R1151,R1155	RS1/16S6801F			
R1106,R1121	RS2MMF100J			
Other Resistors	RS1/16S###J			
<b>[X SUS BLOCK]</b>				
<b><u>SEMICONDUCTORS</u></b>				
IC1202	AXF1143			
IC1201	MM1565AF			
IC1252	PS9117			
IC1251	TND301S			
IC1271	TND307TD			
Q1251	2SC2412K			
Q1272	2SK3325-Z			
D1281	1SS302			
D1201	1SS355			
D1252	CRH01			
<b><u>COILS AND FILTERS</u></b>				
L1204,L1211	INDUCTOR	ATH1186		
F1201	INDUCTOR	CTF1449		
L1201,L1205,L1231		LFEA100J		
<b><u>CAPACITORS</u></b>				
C1214-C1217		ACE1178		
C1297,C1298 (3300P/630V)		ACG1129		
C1212,C1213		ACH1424		
C1231		CEHAT101M10		
C1206		CEHAT101M25		
C1283		CEHAT2R2M2E		
C1208		CEHAT470M16		
C1222,C1272		CEHAT470M25		
C1221		CKSRYB105K6R3		
C1204,C1207,C1223,C1251,C1253		CKSRYF104Z50		
C1273		CKSRYF104Z50		
C1220		CKSYB105K25		
<b><u>RESISTORS</u></b>				
R1204		ACN1166		
R1213		ACN1168		
R1276,R1277		RS3LMF470J		
Other Resistors		RS1/16S###J		
<b><u>OTHERS</u></b>				
KN1201-KN1206	GROUND PLATE	ANK-142		
KN1208-KN1211	GROUND PLATE	ANK-142		
CN1202	6P TOP POST	B6B-EH		
CN1201	8P TOP POST	B8B-EH		
<b>[X D-D CON BLOCK]</b>				
<b><u>SEMICONDUCTORS</u></b>				
IC1321		PS2701A-1(L)		
IC1326		TA76431FR		
Q1324		2SA1037K		
Q1302		2SC4081		
Q1301,Q1323		2SD1898		
Q1321,Q1325,Q1351		HN1C01FU		
D1303,D1324		1SS301		
D1304,D1307,D1325,D1328		1SS355		
D1301,D1302,D1326,D1327		CRH01		
D1321		D1FK60		
D1329,D1330		UDZS4R7(B)		
D1306,D1323,D1331		UDZS5R1(B)		
<b><u>COILS AND FILTERS</u></b>				
⚠ T1301	SWITCHING TRANS.	ATK1159		
⚠ T1321	SWITCHING TRANS.	ATK1160		
<b><u>CAPACITORS</u></b>				
C1325		ACH1428		
C1326		CEHAT100M50		
C1302,C1321		CEHAT101M25		
C1301,C1303,C1323		CKSRYB103K50		
C1304,C1306,C1327		CKSRYB104K16		
C1307,C1324		CKSYB105K25		

**Mark No. Description****Part No.****RESISTORS**

R1337  
R1321,R1322,R1326,R1339  
VR1321  
Other Resistors

RAB4C472J  
RS1/10S224J  
CCP1392  
RS1/16S###J

**SUS CLAMP 1 ASSY  
SEMICONDUCTORS**

D1631

DF20L60U

**CAPACITORS**

C1632

ACE1179

**OTHERS**

KN1632 GROUND PLATE  
CN1631 3P TOP POST  
KN1631 WRAPPING TERMINAL

ANK-142  
B3B-EH  
VNF1084

**SUS CLAMP 2 ASSY  
SEMICONDUCTORS**

D1641

DF20L60U

**CAPACITORS**

C1642

ACE1179

**OTHERS**

KN1642 GROUND PLATE  
CN1641 3P TOP POST  
KN1641 WRAPPING TERMINAL

ANK-142  
B3B-EH  
VNF1084

**43 Y DRIVE ASSY****OTHERS**

2001 DRIVE RADIATION SHEET  
2001 CONDUCTIVE PLATE Y  
2001 DRIVE HEATSINK Y  
2002 DRIVE HEATSINK K  
2002 SCREW

AEH1092  
ANG2832  
ANH1638  
ANH1639  
BMZ30P080FTC

2001 SCREW

PMB30P060FTC

**[Y LOGIC BLOCK]  
SEMICONDUCTORS**

IC2002  
IC2001,IC2004  
IC2003,IC2005

TC74ACT540FT  
TC74ACT541FT  
TC74VHC08FTS1

**CAPACITORS**

C2003  
C2001,C2002,C2004-C2006

CEHAT470M16  
CKSSYB104K10

**RESISTORS**

R2003,R2006  
R2001,R2002,R2017,R2021  
R2004,R2005,R2019,R2020  
Other Resistors

RAB4C101J  
RAB4C470J  
RAB4C472J  
RS1/16S###J

**OTHERS**

CN2001 40P CONNECTOR

AKM1217

**[Y RESONANCE BLOCK]  
SEMICONDUCTORS**

IC2101  
IC2141

AXF1145  
BA10393F

**Mark No. Description****Part No.**

Q2141  
D2101-D2105

2SC4081  
D1FL40

**COILS AND FILTERS**

L2101,L2102 CHOKE COIL  
L2103-L2106 CHOKE COIL

ATH1155  
ATH1193

**CAPACITORS**

C2131-C2134,C2136  
C2103,C2107,C2108 (0.22UF/250V)  
C2104,C2106 (470P/630V)  
C2109-C2112 (3300P/630V)  
C2101,C2145

ACE1178  
ACG1112  
ACG1126  
ACG1129  
CKSRYB105K6R3

C2141,C2143,C2144  
C2102

CKSSYB104K10  
CKSYB105K25

**RESISTORS**

R2101  
R2108  
R2142,R2143  
R2103,R2107  
R2146,R2149

ACN1174  
ACN1241  
RS1/10S1003F  
RS1/10S104J  
RS1/16S5601F

R2147,R2151  
R2102  
Other Resistors

RS1/16S6801F  
RS2MMF100J  
RS1/16S###J

**[Y SUS BLOCK]  
SEMICONDUCTORS**

IC2252,IC2253  
IC2350  
IC2250  
IC2231,IC2251  
IC2203,IC2221

AXF1144  
MM1565AF  
PS9117  
TND301S  
TND307TD

Q2202  
Q2250  
Q2290  
Q2221  
Q2280,Q2281

2SA2142  
2SC4081  
2SK3050  
2SK3325-Z  
2SK3399

D2233  
D2213  
D2203,D2212,D2351  
D2202,D2204,D2205,D2234  
D2251,D2252,D2272

1SS301  
1SS302  
1SS355  
CRH01  
CRH01

D2211  
D2232,D2271  
D2250

D1FK60  
UDZS16(B)  
UDZS5R6(B)

**COILS AND FILTERS**

L2353 INDUCTOR  
F2301-F2320 FERRITE BEAD  
F2352 INDUCTOR  
L2350,L2351,L2354

ATH1186  
ATX1055  
CTF1449  
LFEA100J

**CAPACITORS**

C2330,C2335,C2341,C2342  
C2231 (0.33U/100V)  
C2271,C2272 (0.1U/100V)  
C2336,C2337  
C2270

ACE1178  
ACG1118  
ACG1124  
ACH1424  
ACH1426

C2226  
C2203-C2206

ACH1427  
CCG1186





Mark No.

Description

Part No.

COILS AND FILTERS

A	⚠ T2602 CONVERTER TRANS.	ATK1156
	⚠ T2601 SWITCHING TRANS.	ATK1161

CAPACITORS

B	C2608,C2610	CEHAT101M25
	C2613	CEHAT221M25
	C2606	CEHAT221M6R3
	C2607	CKSRYB102K50
	C2605,C2612,C2614	CKSRYB103K50
	C2601,C2604,C2609	CKSRYB104K16
	C2602,C2615	CKSRYB105K6R3
	C2603	CKSRYF104Z50
	C2611	CKSSYB104K10

RESISTORS

C	R2613	RAB4C472J
	R2641,R2642	RS1/10S224J
	R2629	RS1/16S1002F
	R2625,R2626	RS1/16S1501F
	R2608,R2612,R2630,R2632,R2635	RS1/16S4701F
	R2618	RS1/16S4702F
	R2636	RS1/16S5601F
	R2652	RS1/16S6801F
	R2627	RS3LMF151J
	VR2601	CCP1390
	Other Resistors	RS1/16S###J

POWER SUPPLY UNIT

POWER SUPPLY Unit has no service part.

D

E

F



## 6. ADJUSTMENT



1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
3. Use a stable AC power supply.

### 6.1 ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED

#### ■ When any of the following assemblies is replaced

POWER SUPPLY Unit	➡	No adjustment required
OB DIGITAL Assy	➡	Writing of backup data is required. Refer to the "7.1.5 BACKUP WHEN THE PANEL UNIT IS ADJUSTED. "
43 X DRIVE Assy	➡	No adjustment required
43 Y DRIVE Assy	➡	No adjustment required
Service Panel	➡	Refer to the "6.6 METHOD FOR REPLACING THE SERVICE PANEL ASSY."
OBE MAIN assy	➡	No adjustment required
R06 D-TUNER Assy	➡	No adjustment required
Other assemblies	➡	No adjustment required

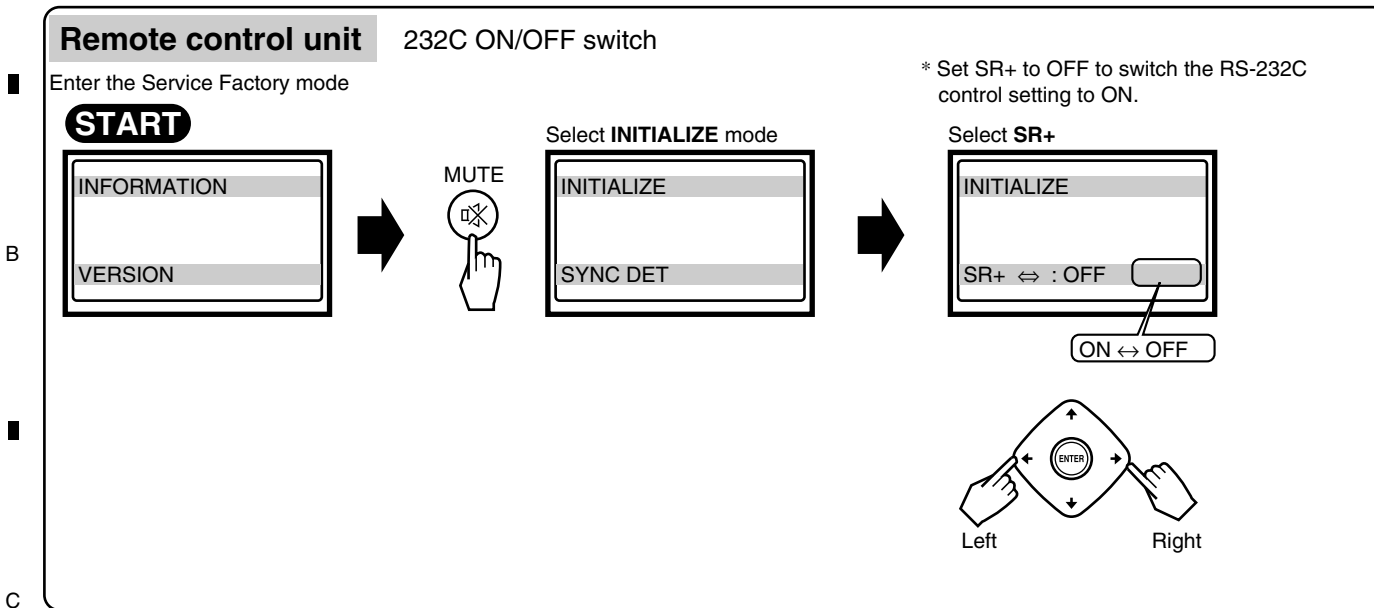
#### ■ When any part in the following assemblies is replaced

POWER SUPPLY Unit	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
OB DIGITAL Assy	➡	No adjustment required
43 X DRIVE Assy	➡	No adjustment required
43 Y DRIVE Assy	➡	No adjustment required
OBE MAIN Assy	➡	Replacement of components IC4804, IC4806, IC5202, IC5207, IC6003 and IC6201 on the circuitboard can cause malfunction and /or failure. If replacement is necessary, the assembly must be replaced.
R06 D-TUNER Assy	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
Other assemblies	➡	No adjustment required

## 6.2 USING RS-232C COMMANDS

- A The circuitry for the PDP-436SXE/RXE is as shown in the figure below, and activation/deactivation (ON/OFF) of RS-232C control is selectable. As OFF is selected at shipment, to enable RS-232C control when servicing, it is necessary to switch the setting to ON.

### ● How to switch the RS-232C control setting to ON by Service Factory Mode



### ● How to switch the RS-232C control setting to ON by Remote Control unit

#### [ To Switch RS-232C control to ON ]

- Hold the **VOLUME**  $\triangleleft +$  or  $\triangleleft -$  key on the remote control unit pressed for 3-10 seconds during Standby mode. Then within 3 seconds after the key is released, hold the **2-screen**  $\blacksquare$  key on the remote control unit pressed for 3-10 seconds. Then within 3 seconds after the key is released, use the **SET** key on the remote control unit to set to RS-232C. The path is switched to that for RS-232C control. The baud rate becomes 9,600 bps.

#### [ To Switch RS-232C control to OFF ]

- D Hold the **VOLUME**  $\triangleleft +$  or  $\triangleleft -$  key on the remote control unit pressed for 3-10 seconds during Standby mode. Then within 3 seconds after the key is released, hold the **2-screen**  $\blacksquare$  key on the remote control unit pressed for 3-10 seconds. Then within 3 seconds after the key is released, use the **HOME MUNU** key on the remote control unit to set to RS-232C. The path is switched to that for SR+, and RS-232C control becomes OFF.

#### [ TIPS ]

- \* During IF Standby (once 10 seconds or more has passed after the LED goes dark during communication), the first keypress may not be accepted. In such a case, for a key operation, first press any key other than the POWER key and CH keys, then the desired key.

Note: For switching the RS-232C control setting, use the remote control unit supplied with the PDP-436XDE, etc., because the 2-Screen key (for multiscreen) is not provided with the remote control unit supplied with the PDP-436SXE/RXE.

## 6.3 SERVICE FACTORY MODE

To operate in Service Factory mode, use the supplied remote control unit.

### How to enter Service Factory Mode

While in Standby mode, follow the below procedure with the remote control to enter Service Factory mode.

1. Press the [ DISPLAY ] key.
2. 3 second counter will start.
3. After 3 second, press [ LEFT ] key.  
(If no operation is done within 10 seconds, the Service Factory routine is cleared, and the standby mode is returned.)
4. 5 second counter will start. The Service Factory is up and ready.
5. Before 5 second counter ends, press [ UP ] key.
6. Before 5 second counter ends, press [ LEFT ] key.
7. Before 5 second counter ends, press [ RIGHT ] key.
8. Before 5 second counter ends, press [ POWER ] key.
9. If the procedure is correct within the counting time, the Service Factory Mode starts.

\* During step 3 to 8, if other operation is done, the Service Factory routine is cleared.

\* If the counting time is over up, the normal standby mode is returned.

### Operation in Service Factory Mode

#### Functions whose settings are set to OFF

The settings for the following functions are set to OFF when Service Factory mode is entered (including when the "FAY" command is received):

- FREEZE
- Mask Control
- ORBITER (Operating at center value)

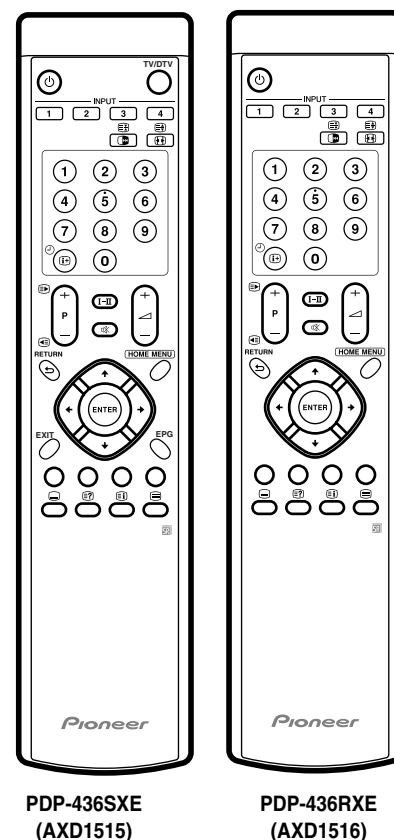
#### User data

User data will be treated as follows:

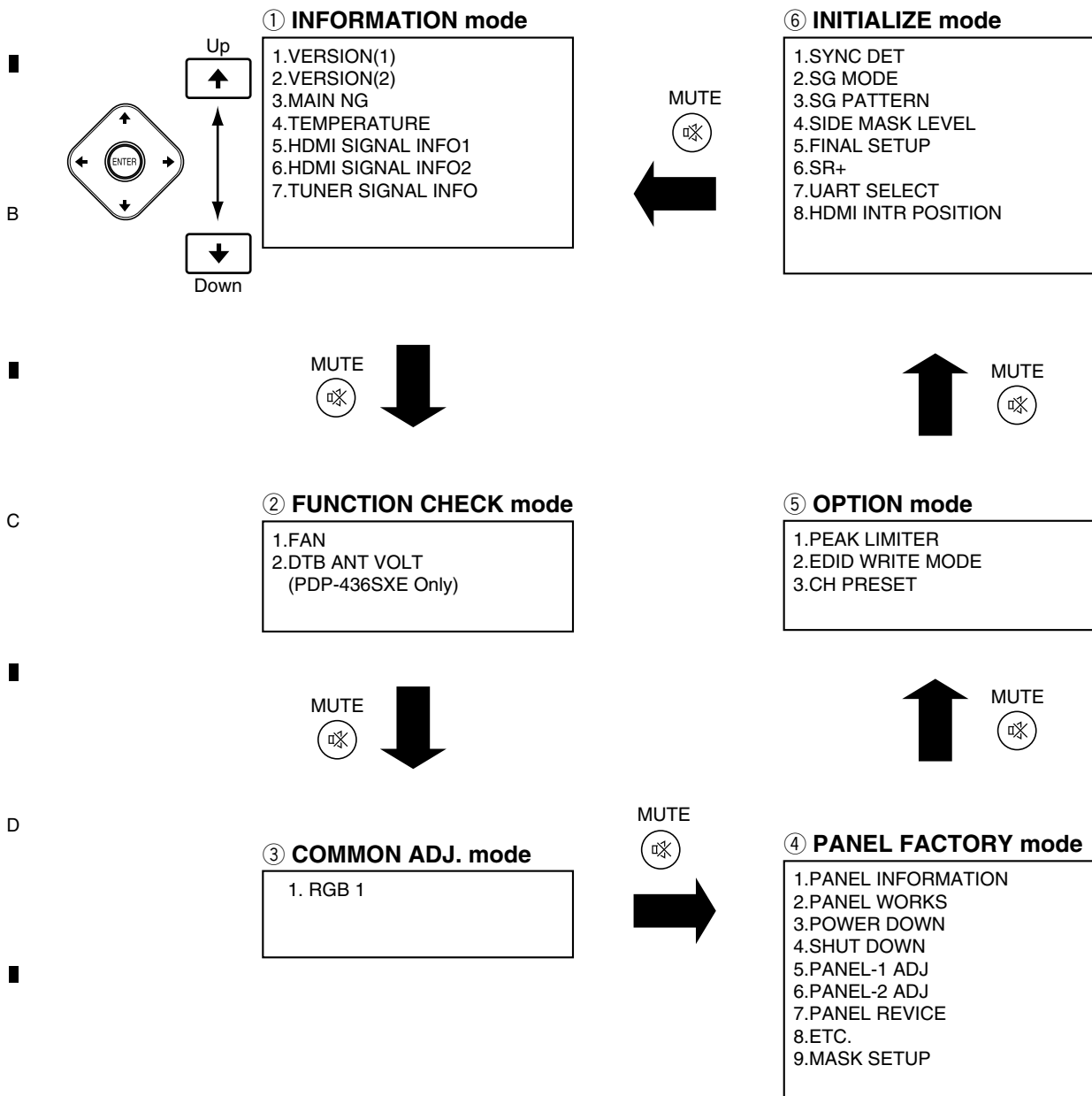
- User data on picture- and audio-quality adjustments are not reflected, and factory-preset data are output (user data will be retained in memory). When the unit enters Factory mode, the current audio-quality adjustment data will still be retained in memory.
- As to data on various settings, user data will be applied to the items that are associated with signal format change (screen size switching, etc.).
- Data on screen (i.e., screen position, and not including data on screen size) are reset to the default values (data stored in memory will be retained). Screen size will be retained.

### Remote control codes in Service Factory mode

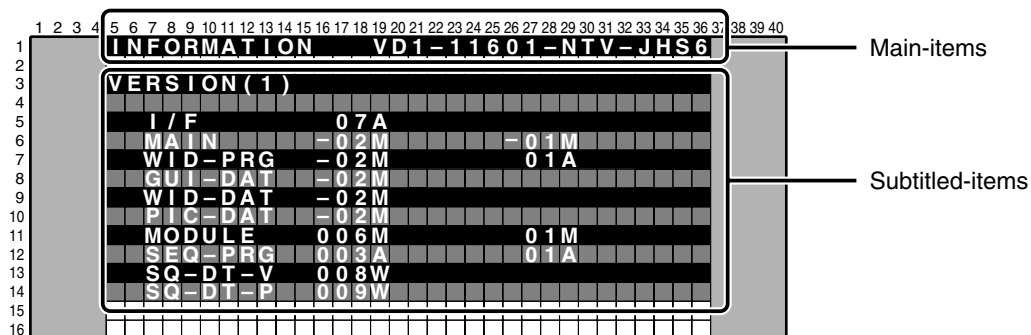
SR Function	Main Function	Remarks
Muting	Switching the main items	Shifting to the next main item (top)
DOWN	Switching the subtitled items	Shifting downward to the next subtitled item
UP	Switching the subtitled items	Shifting upward to the next upper layer
LEFT	Increasing the adjustment value	Increasing the adjustment value
RIGHT	Decreasing the adjustment value	Decreasing the adjustment value
SET	Switching layers	Shifting downward or upward to the next lower or upper layer
INPUT	Selecting input	Shifting the input to the next function
INPUTxx	Selecting input	Switching the input to xx
CH+	Increasing the channel number	Advancing a preset channel (effective when Function is set to TV)
CH-	Decreasing the channel number	Turning a preset channel backward (effective when Function is set to TV)
Numeric keys	Function: TV	Function: TV (previously selected channel number is selected)
POWER	Power OFF	Turning the power off
FACTORY	Factory OFF	Turning Service Factory mode off
MENU	Menu ON	Turning Service Factory mode off and Menu mode on



## A ■ Changes of the Service Factory menus

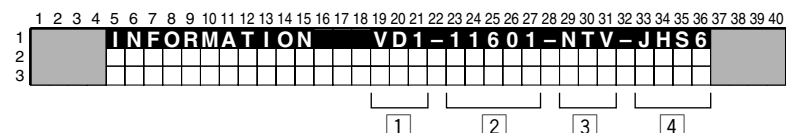


## ■ Indications in Service Factory mode



## ■ Main-item indications

Four parameters are displayed:



### 1 Input function

Input Functions	On-Screen Display
INPUT 1- 4	AV 1 - 4
Analogue Tuner	AIR
Digital Tuner	ARD

Note : ARD IS PDP-436SX ONLY.

### 4 Option (Destination, etc.)

Options	On-Screen Display
Advanced : PDP-436SX	EHB6
Basic : PDP-436RX	EBB6

### 2 SIG mode and screen size

Note: See SIG-Mode Tables. (See next page.)

### 3 Color system and signal type

Color System and Signal Type	On-Screen Display	Color System and Signal Type	On-Screen Display
NTSC	NTV	NTSC	NTS
PAL	PLV	PAL	PLS
PAL N	PNV	PAL N	PNS
PAL M	PMV	PAL M	PMS
SECAM	SCV	SECAM	SCS
4.43NTSC	4NV	4.43NTSC	4NS
BLACK/WHITE	BWV	BLACK/WHITE	BWS
Y / CB / CR	CBR	RGB	RGB
Y / PB / PR	PBR	Digital video signal	DIG

## ● SIG-Mode Table

The signal mode is displayed in four characters:

**1st and 2nd characters** : Resolution of the input signal ( numerics for the video signals, and alphabetics for the PC signals )

**3rd and 4th characters** : Grouping of the V frequencies (refresh rate)

**5th character** : Selection of the screen size by the user is displayed.

### SIG-Mode table for video signals (resolutions and V frequencies)

1st and 2nd	3rd and 4th	Signal Type	Fv (Hz)	Fh (kHz)
10	50	SDTV*625i	50.000	15.625
	60	SDTV*525i	60.000	15.750
12	60	SDTV*525i (PAL60)	60.000	15.750
20	50	SDTV*625p	50.000	31.250
	60	SDTV*525p	60.000	31.500
30	50	HDTV*1125i	50.000	28.125
	60	HDTV*1125i	60.000	33.750
40	50	HDTV*750p	50.000	37.500
	60	HDTV*750p	60.000	45.000
50	24	HDTV*1125p	24.000	27.000

### Selection of the screen size by the user is displayed.

5th	Description on GUI
1	4:3
2	FULL(FULL1)
3	ZOOM
4	CINEMA
5	WIDE
6	FULL 14:9
7	CINEMA 14:9
8	FULL2

## ■ Factory Menus

### ① INFORMATION mode

#### ● Operation items

No.	Function / Display	Content	RS-232C
1	VERSION (1)	The flash memory versions for each device are displayed. (common part)	QS1
2	VERSION (2)	The flash memory versions for each device are displayed. (individual part)	QS6
3	MAIN NG	The shutdown detected on Main u-com and its time of occurrence are displayed.	QNG
4	TEMPERATURE	Information of temperature and fan status on the set are displayed.	QMT
5	HDMI SIGNAL INFO 1	The file information of HDMI series are displayed.	—
6	HDMI SIGNAL INFO 2		—
7	TUNER SIGNAL INFO	The signal information on TUNER is displayed.	—

#### 1. VERSION (1)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1																																							
2																																							
3																																							
4																																							
5																																							
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13																																							
14																																							
15																																							
16																																							

Flash memory on Device	On-Screen Display
IF microcomputer	I/F
Main microcomputer	MAIN
Program for CARRERA-MANTA	WID-PRG
GUI data for CARRERA-MANTA	GUI-DAT
Enhanced data for CARRERA-MANTA.	WID-DAT
Picture Quality data for CARRERA-MANTA	PIC-DAT
Module microcomputer(for the PDP)	MODULE
Program for ASTRA-MANTA(for the PDP)	SEQ-PRG
Sequence data for ASTRA-MANTA Video	SQ-DT-V
Sequence data for ASTRA-MANTA PC	SQ-DT-P

#### 2. VERSION (2)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1																																							
2																																							
3																																							
4																																							
5																																							
6																																							
7																																							
8																																							
9																																							
10																																							
11																																							
12																																							
13																																							
14																																							
15																																							
16																																							

Device	On - Screen Display	Version Display	Remarks
DTB Software Version	DTB	4 character	PDP-436SX only
Teletext ucom Software Version	TEXT	60 character	20 character x 3
User Password	PASSWORD	4 character	

### 3. MAIN NG

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1																																							
2																																							
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16																																							

#### ● Media Receiver NG information

OSD: MAIN	OSD: SUB	Cause of Shutdown
MODULE	----	Abnormality in Module microcomputer communication
MA-SRL		Abnormality in 3-wire Serial Communication of the Main microcomputer.
	IF	Communication failure of IF microcomputer
	MULTI1	MANTA communication failure(MULTI1)
	I/P	MANTA communication failure(I/P)
	D-SEL	MANTA communication failure(D-SEL)
MA-IIC		Abnormality in Main microcomputer IIC communication
	FE1	Analog Tuner 1 (Front End 1)
	MPX	MPX
	AV-SW	AV Switch
	RGB-SW	RGB Switch
	M-VDEC	Main VDEC
	ADC	AD/PLL
	HDMI	HDMI
	TX-COM	M2 Communication
	TX-BSY	M2 Busy
	MA-EEP	64k EEPROM
MAIN		Abnormality in Main microcomputer communication
FAN		Fan stopped
TEMP2		Abnormally high temperature
DTUNER (*)		Failure of the Digital Tuner
	PS/RST	Failure in DTB Starting
	RETRY	DTB communication failure
M-DCDC		Abnormality in ASIC power line (DC-DC)

\*: PDP-436SX only



#### 4. TEMPERATURE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1																																							
2																																							
3																																							
4																																							
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11																																							
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13																																							
14																																							
15																																							
16																																							

This displays the internal set temperature and fan rotating state.

- TEMP2** : The value read from the temperature sensor is displayed in the range of 000-255. Sensor Temperature (°C) =  $-0.57 \times \text{TEMP2} + 120.33$   
(When the sensor temperature exceeds over 60°C, SD process stats.)
- FAN** : The value of the Fan rotating state is displayed.  
STOP: stopped, MIN: slow speed, MAX: high speed

## A 6. HDMI SIGNAL INFO

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40					
1	INFORMATION														VD1-11601-NTV-JHS6																													
2																																												
3	HDMI SIGNAL INFO 1																																											
4																																												
5	0x60				-4E:00				0x68				-45:00																															
6					-4F:00								-46:00																															
7					-50:00								-47:00																															
8					-51:00								-48:00																															
9					-55:00								-84:00																															
10	0x68				-2A:00								-85:00																															
11					-30:00								-86:00																															
12					-31:00								-87:00																															
13					-44:00								-88:00																															
14																																												
15																																												
16																																												

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																							
1	INFORMATION																VD1-11601-NTV-JHS6																																													
2																																																														
3	HDMI SIGNAL INFO 2																																																													
4																																																														
5	0x60				-3A:00				0x68				-06:00																																																	
6					-3B:00								-07:00																																																	
7					-3C:00								-08:00																																																	
8					-3D:00								-0C:00																																																	
9													-0D:00																																																	
10													-0E:00																																																	
11																																																														
12																																																														
13																																																														
14																																																														
15																																																														
16																																																														

- Technical examination display (Reading status registers in HDMI receiver and displaying them by HEX value.)

HDMI SIGNAL INFO 1		
SA		Context
0x60	- 4E:	Video DE pixels [7:0]
	- 4F:	Video DE pixels [11:8]
	- 50:	Video DE lines [7:0]
	- 51:	Video DE lines [10:8]
	- 55:	Video status (interlace or progressive, sync polarity)
0x68	- 2A:	Audio in channel status (PCM, copy information etc.)
	- 30:	Audio in SPDIF channel status (sampling frequency)
	- 31:	Audio in SPDIF channel status (sample word length)
	- 44:	AVI InfoFrame data1 (video format etc.)
	- 45:	AVI InfoFrame data2 (colorimetry, aspect ratio)
	- 46:	AVI InfoFrame data3 (video scaling)
	- 47:	AVI InfoFrame data4 (video identification code)
	- 48:	AVI InfoFrame data5 (pixel repeat value for 2880dot)
	- 84:	Audio InfoFrame data1 (channel count, cording type)
	- 85:	Audio InfoFrame data2 (always zero)
	- 86:	Audio InfoFrame data3 (always zero)
	- 87:	Audio InfoFrame data4 (channel / speaker allocation)
	- 88:	Audio InfoFrame data5 (downmix inhibit, level shift value for downmixing)

HDMI SIGNAL INFO 2		
SA		Context
0x60	- 3A:	Video full H resolution [7:0]
	- 3B:	Video full H resolution [12:8]
	- 3C:	Video full V lines [7:0]
	- 3D:	Video full V lines [10:8]
0x68	- 06:	N Value for audio clock regeneration method. [7:0]
	- 07:	N Value for audio clock regeneration method. [15:8]
	- 08:	N Value for audio clock regeneration method. [19:16]
	- 0C:	CTS Value for audio clock regeneration method. [7:0]
	- 0D:	CTS Value for audio clock regeneration method. [15:8]
	- 0E:	CTS Value for audio clock regeneration method. [19:16]

## 7. TUNER SIGNAL INFO

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40									
1	INFORMATION																VD1-11601-NTV-EHS6																															
2																																																
3	TUNER SIGNAL INFO																																															
4																																																
5	MVDEC																-00:00								MVDEC																-1D:00							
6																	-01:00																															
7																	-02:00								SVDEC																-88:00							
8																	-15:00																								-89:00							
9																	-16:00																								-8A:00							
10																	-17:00																								-8B:00							
11																	-18:00																								-8C:00							
12																	-19:00																															
13																	-1A:00																															
14																																																
15																																																
16																																																

### ● Tuner signal information in MVDEC / SVDEC.

Device	SA	Context
MVDEC	00h	Signal distinction 1
	01h	Signal distinction 2
	02h	Flag detection output
	15h	Noise level detection 1
	16h	Noise level detection 2
	17h	Non - standard signal detection
	18h	Subcarrier signal detection
	19h	ACC data output
	1Ah	ACC information output
	1Dh	Input signal mode
SVDEC	88h	Status register 1 (TV/VCR status)
	89h	Status register 2 (Macrovision detection etc)
	8Ah	Status register 3 (Front-end AGC gain value)
	8Bh	Status register 4 (Subcarrier to horizontal (SCH) phase)
	8Ch	Status register 5 (signal distinction)

## ② FUNCTION CHECK

### ● Operation items

No.	Display	Content	RS-232C
1	FAN <=>	Control FAN speed for Force.	—
2	DTB ANT VOLT <=>	Change the power supply voltage for DTB antenna.	—

## ③ COMMON ADJ. mode

### RGB1

Only for the technical use.

## ④ PANEL FACTORY mode

### ● Operation items

No.	Function / Display	Summary Descuption	RS - 232C
1	PANEL INFORMATION	Display DIGITAL Assy software version and backup state, etc.	—
2	PANEL WORKS	Display pulse meter and hour meter, etc.	—
3	POWER DOWN	Display power-down history.	—
4	SHUT DOWN	Display shut-down history Module u-com detecting	—
5	PANEL-1 ADJ ( + )	Adjust sustain wave form and drive power.	—
6	PANEL-2 ADJ ( + )	Adjust panel white balance and ABL.	—
7	PANEL REVICE ( + )	Set the correction level for panel degradation.	—
8	ETC. ( + )	Act as copying back-up data and cleaing various data.	—
9	MASK SETUP ( + )	Display the asc screen.	—

## ■ Configuration of Panel Factory mode

No.	Submode Name		Adjustable Range	Remarks
	Submode Items			
1	PANEL INFORMATION			
2	PANEL WORKS			
3	POWER DOWN			
4	SHUT DOWN			
5	PANEL-1 ADJ (+)			
5-1		X-SUS B <=>	120 to 136	Equivalent to XSB
5-2		Y-SUS B <=>	120 to 136	Equivalent to YSB
5-3		Y-SUSTAIL T <=>	120 to 136	Equivalent to YTG
5-4		Y-SUSTAIL W <=>	120 to 136	Equivalent to YTW
5-5		XY-RST W <=>	120 to 136	Equivalent to RSW
5-6		VOL SUS <=>	000 to 255	Equivalent to VSU
5-7		VOL OFFSET <=>	000 to 255	Equivalent to VOF
5-8		VOL RST P <=>	000 to 255	Equivalent to VRP
5-9		SUS FREQ. <=>	MODE1 to MODE8	Equivalent to SFR
6	PANEL-2 ADJ (+)			
6-1		R-HIGH <=>	000 to 511	Equivalent to PRH
6-2		G-HIGH <=>	000 to 511	Equivalent to PGH
6-3		B-HIGH <=>	000 to 511	Equivalent to PBH
6-4		R-LOW <=>	000 to 999	Equivalent to PRL
6-5		G-LOW <=>	000 to 999	Equivalent to PGL
6-6		B-LOW <=>	000 to 999	Equivalent to PBL
6-7		ABL <=>	000 to 255	Equivalent to ABL
7	PANEL REVISE			
7-1		R-LEVEL <=>	LV-0 to LV-7	Equivalent to RRL
7-2		G-LEVEL <=>	LV-0 to LV-7	Equivalent to RGL
7-3		B-LEVEL <=>	LV-0 to LV-7	Equivalent to RBL
8	ETC. (+)			
8-1		BACKUP DATA <=>	NO OPRT<=>TRANSFER or ERR	Equivalent to BCP
8-2		DIGITAL EEPROM <=>	NO OPRT<=>DELETE/REPAIR	Equivalent to FAJ/UAJ
8-3		PD INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CPD
8-4		SD INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CSD
8-5		HR-MTR INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CHM
8-6		PM/B1-B5 <=>	NO OPRT <=>CLEAR	Equivalent to CPM
8-7		P COUNT INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CPC
9	MASK SETUP (+)			
9-1		MASK OFF		Equivalent to MKS+S00
9-2		SGL MASK 01 <=>	<=>48V<=>50V<=>60V<=>60P<=>70P<=>72V<=>75V<=> (Select each sequence.)	Equivalent to MKS+S01
9-3		SGL MASK 02 <=>		Equivalent to MKS+S02
		•••		•••
9-62		CMB MASK 08 <=>		Equivalent to MKC+S08
9-63		CMB MASK 09 <=>		Equivalent to MKC+S09

A

## ■ Details on submodes related to the panel

The GUI display examples here are those displayed when the main unit is used with the 50-inch model.

## ■ 1. PANEL INFORMATION

B

	1	5	10	15	20	25	30	32
1			PANEL FACT.		IN1-50602-RGB-EHS6			
			PANEL INFORMATION					
5			MODULE	-01SM		01S		
			SEQ-PRG	-01AM		02A		
			SQ-DT-V	520W				
			SQ-DT-P	520W				
10			SERIAL					
			DIG.EEP	ADJUSTED				
			BACKUP	NO DATA!				
15								
16								

### ■ Key operation

- <DOWN> : Shifting to PANEL WORKS
- <UP> : Shifting to MASK SETUP (+)
- <SEL> : MASK ON/OFF
- <L/R> : Updating displayed information

The version of the microcomputer of the panel, serial number of the panel, adjustment states of the panel unit (OB DIGITAL ASSY), and backup status are displayed.

## 2. PANEL WORKS

D

	1	5	10	15	20	25	30	32																								
1	PANEL FACT. IN1-50602-RGB-EHS6																															
	PANEL WORKS																															
5	PM-B1 00000715 M																															
	PM-B2 00000607 M																															
	PM-B3 00000852 M																															
	PM-B4 00000668 M																															
	PM-B5 00000733 M																															
10	HR-MTR 000025H 20M																															
	P-COUNT 00000000 TIMES																															
	TEMP1 +027.41 C																															
15																																
16																																

### ■ Key operation

- <DOWN> : Shifting to POWER DOWN
- <UP> : Shifting to PANEL INFORMATION
- <SEL> : MASK ON/OFF
- <L/R> : Updating displayed information

- The data from the pulse meter for each block from PM-B1 to PM-B5 are indicated. The values stored in the EEPROM (3 bytes each) are each converted into a decimal number, and the higher-order 8 digits are displayed (that means that the lowest-order digit represents millions).
- TEMP1: Indicates the temperature of the panel. By your pressing the L or R key, the temperature value can be updated.

F

### 3. POWER DOWN

	1	5	10	15	20	25	30	32
1		PANEL	FACT.		IN1-50602-RGB-EHS6			
		POWER	DOWN			000124H	23M	
		1ST		2ND				
5		1	X-DRV	-----		000124H	21M	
		2	Y-SUS	SQ-NON		000115H	05M	
		3	SCAN	-----		000107H	53M	
		4	POWER	SQ-NON		000098H	47M	
10		5	ADRS-	-----		000051H	30M	
		6	SCN5V	X-SUS-		000022H	21M	
		7	SQ-NON	-----		000000H	57M	
		8						
15								
16								

#### ■ Key operation

- <DOWN> : Shifting to SHUTDOWN
- <UP> : Shifting to PANEL WORKS
- <SEL> : MASK ON/OFF
- <L/R> : Updating displayed information

- Basically, data acquired with the command QPD are displayed in the columns "1ST" and "2ND", with the values from the hour meter when the power-down occurred.

#### <Causes of power-down and corresponding OSD indications>

Cause of power-down	OSD Indication	Cause of power-down	OSD Indication
POWER SUPPLY Unit	P-PWR	ADDRESS Assy	ADRS
SCAN Assy	SCAN	X-DRIVE Assy	X-DRV
5V power for SCAN	SCN5V	DCDC for X drive	X-DCDC
Not used		X-SUS	X-SUS
DCDC for Y drive	Y-DCDC	Sequence drive stopped	SQ-NON
Y-SUS	Y-SUS	Specification inability	UNKNOW

### 4. SHUT DOWN

	1	5	10	15	20	25	30	32
1		PANEL	FACT.		IN1-50602-RGB-EHS6			
		SHUT	DOWN			000124H	23M	
		MAIN		SUB				
5		1	TEMP1	-----		000124H	21M	
		2	AUDIO	-----		000115H	05M	
		3	MD-IIC	EEPROM		000107H	53M	
		4	SQ-IC	-----		000098H	47M	
10		5	MD-IIC	VOL IC		000051H	30M	
		6						
		7						
		8						
15								
16								

#### ■ Key operation

- <DOWN> : Shifting to PANEL-2ADJ (+)
- <UP> : Shifting to POWER DOWN
- <SEL> : MASK ON/OFF
- <L/R> : Updating displayed information

- Basically, data acquired with the command QSD (for MDU-IIC, subcategory data are also displayed) are displayed with the values from the hour meter when the shutdown occurred.

#### <Causes of shutdown and corresponding OSD indications>

Cause of shutdown (main)	OSD Indication
SEQUENCE PROCESSOR	SQ-IC
MDU-IIC	MDU-IIC (with subcategory)
Abnormality in RST2	RST2
Panel having high temperature	TEMP1
Short-circuited speaker	AUDIO

Cause of shutdown (sub)	OSD Indication
EEPROM	EEPROM (IC3156)
BACKUP	BACKUP (IC3754)
DAC	DAC (IC3302 to IC3304)
Audio IC	VOL-IC (IC3158)

A

## 5. PANEL-1 ADJ

	1	5	10	15	20	25	30	32																								
1	PANEL FACT. IN1-50602-RGB-EHS6																															
	[TBL1/60VS]																															
5																																
10																																
15	PANEL-1 ADJ (+)																															
16																																

### ■ Key operation

<DOWN> : Shifting to PANEL-2 ADJ (+)  
 <UP> : Shifting to POWER DOWN  
 <SET> : Shifting to the next nested layer  
 <SEL> : MASK ON/OFF

B

	1	5	10	15	20	25	30	32																								
1	PANEL FACT. IN1-50602-RGB-EHS6																															
	PANEL-1 ADJ [TBL1/60VS]																															
5																																
10																																
15	X-SUS B <=> : 128																															
16																																

### ■ Key operation

<DOWN> : Shifting to the next item  
 <UP> : Shifting to the previous item  
 <RIGHT> : Adding by one to the adjustment value  
 <LEFT> : Subtracting by one from the adjustment value  
 <VOL+> : Adding by 10 to the adjustment value  
 <VOL-> : Subtracting by 10 from the adjustment value  
 <SET> : Determining the adjustment value and shifting to the upper layer  
 <SEL> : MASK ON/OFF

C

D

### <Drive-sequence indications and indications for the ABL/WB tables>

(The OSD indications are displayed at the right part of the third line for submode PANEL-1 ADJ and subsequent submodes.)

Type of WB/ABL Tables		Type of Drive Sequences					
		Standard Video/MASK ON		Nonstandard Video		PC	
TBL1		48VS		---		60PS	Not used for consumer products
TBL2		50VS		50VN		70PS	
TBL3		60VS		60VN			
TBL4		72VS	Only Mask indication	---			
		75VS		75VN			

E

### <Lower-layer items of PANEL-1 ADJ>

No.	Items	Adjustment/Setting Value	Remarks
1	X-SUS B <=>	120 to 136	Equivalent to XSB
2	Y-SUS B <=>	120 to 136	Equivalent to YSB
3	Y-SUSTAIL T <=>	120 to 136	Equivalent to YTG
4	Y-SUSTAIL W <=>	120 to 136	Equivalent to YTW
5	XY-RST W <=>	120 to 136	Equivalent to RSW
6	VOL SUS <=>	000 to 255	Equivalent to VSU
7	VOL OFFSET <=>	000 to 255	Equivalent to VOF
8	VOL RST P <=>	000 to 255	Equivalent to VRP
9	SUS FREQ. <=>	<=>MODE1 to MODE8<=>	Equivalent to SFR

F



## 6. PANEL-2 ADJ

	1	5	10	15	20	25	30	32																								
1	PANEL FACT. IN1-50602-RGB-EHS6																															
	[TBL1/60VS]																															
5																																
10																																
15	PANEL-2 ADJ (+)																															
16																																

### ■ Key operation

- <DOWN> : Shifting to PANEL REVISE
- <UP> : Shifting to PANEL-1 ADJ (+)
- <SEL> : MASK ON/OFF
- <SET> : Shifting to the next nested layer

	1	5	10	15	20	25	30	32																								
1	PANEL FACT. IN1-50602-RGB-EHS6																															
	PANEL-2 ADJ [TBL1/60VS]																															
5																																
10																																
15	R-HIGH <=> : 256																															
16																																

### ■ Key operation

- <DOWN> : Shifting to the next item
- <UP> : Shifting to the previous item
- <RIGHT> : Adding by one to the adjustment value
- <LEFT> : Subtracting by one from the adjustment value
- <VOL+> : Adding by 10 to the adjustment value
- <VOL-> : Subtracting by 10 from the adjustment value
- <SET> : Determining the adjustment value and shifting to the upper layer
- <SEL> : MASK ON/OFF

### <Lower-layer items of PANEL-2 ADJ>

No.	Items	Adjustment/Setting Value	Remarks
1	R-HIGH <=>	000 to 511	Equivalent to PRH
2	G-HIGH <=>	000 to 511	Equivalent to PGH
3	B-HIGH <=>	000 to 511	Equivalent to PBH
4	R-LOW <=>	000 to 999	Equivalent to PRL
5	G-LOW <=>	000 to 999	Equivalent to PGL
6	B-LOW <=>	000 to 999	Equivalent to PBL
7	ABL <=>	000 to 255	Equivalent to ABL

A

## 7. PANEL REVISE

	1	5	10	15	20	25	30	32																								
1	PANEL FACT. IN1-50602-RGB-EHS6																															
	[TBL1/60VS]																															
5																																
10																																
15	PANEL REVISE (+)																															
16																																

## ■ Key operation

- <DOWN> : Shifting to ETC.(+)  
 <UP> : Shifting to PANEL-2 ADJ (+)  
 <SEL> : MASK ON/OFF  
 <SET> : Shifting to the next nested layer

B

	1	5	10	15	20	25	30	32																								
1	PANEL FACT. IN1-50602-RGB-EHS6																															
	PANEL REVISE [TBL1/60VS]																															
5																																
10																																
15	R-LEVEL <=> : LV-0																															
16																																

## ■ Key operation

- <DOWN> : Shifting to the next item  
 <UP> : Shifting to the previous item  
 <RIGHT> : Adding by one to the adjustment value  
 <LEFT> : Subtracting by one from the adjustment value  
 <VOL+> : Adding by 10 to the adjustment value  
 <VOL-> : Subtracting by 10 from the adjustment value  
 <SET> : Determining the setting value and shifting to the upper layer  
 <SEL> : MASK ON/OFF

C

D

## &lt;Lower-layer items of PANEL REVISE&gt;

No.	Items	Adjustment/Setting Value	Remarks
1	R-LEVEL <=>	<=>LV-0 to LV-7<=>	Equivalent to RRL
2	G-LEVEL <=>	<=>LV-0 to LV-7<=>	Equivalent to RGL
3	B-LEVEL <=>	<=>LV-0 to LV-7<=>	Equivalent to RBL

E

F

## 8. ETC.

	1	5	10	15	20	25	30	32																								
1	PANEL FACT. IN1-50602-RGB-EHS6																															
	[TBL1/60VS]																															
5																																
10																																
15	ETC. (+)																															
16																																

### ■ Key operation

- <DOWN> : Shifting to MASK SETUP (+)
- <UP> : Shifting to PANEL REVISE (+)
- <SEL> : MASK ON/OFF
- <SET> : Shifting to the next nested layer

	1	5	10	15	20	25	30	32																								
1	PANEL FACT . IN1-50602-RGB-EHS6																															
	ETC . [TBL1/60VS]																															
5																																
10																																
15	BACKUP EEPROM <=> :NO OPRT																															
16																																

### ■ Key operation

- <DOWN> : Shifting to the next item
- <UP> : Shifting to the previous item
- <RIGHT> : Adding by one to the adjustment value
- <LEFT> : Subtracting by one from the adjustment value
- <SET> : Determining the setting value and shifting to the upper layer
- <SEL> : MASK ON/OFF

### <Lower-layer items of ETC.>

No.	Items	Adjustment/Setting Value	Remarks
1	BACKUP DATA <=>	<=>NO OPRT<=>TRANSFER<=>	"ERR" is indicated when no data are in the backup EEPROM. To activate the option to select TRANSFER, press the SET key about 5 seconds. (There is a situation resting more than 5 seconds.)
2	DIGITAL EEPROM <=>	<=>NO OPRT<=>REPAIR/DELETE<=>	"DELETE" is indicated when the panel unit has been already adjusted. To activate the option to select REPAIR/DELETE, press the SET key about 5 seconds. (There is a situation resting more than 5 seconds.)
3	PD INFO. <=>	<=>NO OPRT<=>CLEAR<=>	To activate the option to select CLEAR, repeatedly press the SET key about 5 seconds. (There is a situation resting more than 5 seconds.)
4	SD INFO. <=>	<=>NO OPRT<=>CLEAR<=>	
5	HR-MTR INFO. <=>	<=>NO OPRT<=>CLEAR<=>	
6	PM/B1-B5 <=>	<=>NO OPRT<=>CLEAR<=>	
7	P-COUNT INFO. <=>	<=>NO OPRT<=>CLEAR<=>	

- "NO OPRT" is selected when this submode is entered (to avoid accidental misoperation).
- When each item is set, the process starts then the unit shifts to the upper layer. (When NO OPRT is determined, the unit will shift to the upper layer without doing anything.)
- When BACK UP DATA are set to be backed up, if the digital EEPROM has not been adjusted, LED operation becomes that RED LED lights + BLUE LED flashes (200ms).

A

## 9. MASK SETUP

	1	5	10	15	20	25	30	32																								
1	PANEL FACT. IN1-F32-RGB-EHS																															
	[TBL1/60VS]																															
5																																
10																																
15	MASK SETUP (+)																															
16																																

### ■ Key operation

<DOWN> : Shifting to PANEL INFORMATION  
 <UP> : Shifting to ETC. (+)  
 <SEL> : MASK ON/OFF  
 <SET> : Shifting to the next nested layer

B

	1	5	10	15	20	25	30	32																								
1	PANEL FACT. IN1-F32-RGB-EHS																															
	MASK SETUP [TBL1/60VS]																															
5																																
10																																
15	SGL MASK 01 : V60																															
16																																

### ■ Key operation

<DOWN> : Shifting to the next MASK  
 <UP> : Shifting to the previous MASK  
 <RIGHT> : Changing MASK sequence (+)  
 <LEFT> : Changing MASK sequence (-)  
 <SET> : Determining the setting value  
 and shifting to the upper layer  
 <SEL> : MASK ON/OFF

C

D

### <Lower-layer items of MASK SETUP>

No.	Items	Adjustment/Setting Value	Remarks
1	MASK OFF		Equivalent to MKS+S00
2	SGL MASK 01 <=>		Equivalent to MKS+S01
3	SGL MASK 02 <=>	<=>48V<=>50V<=>60V<=>	Equivalent to MKS+S02
4	...	60P<=>70P<=>72V<=>75V<=>	...
5	CMB MASK 08 <=>		Equivalent to MKC+S08
6	CMB MASK 09 <=>		Equivalent to MKC+S09

- With the keys <LEFT> and <RIGHT>, the Panel drive sequence in the MASK indication is changed in the following way:  
 <=>48V<=>50V<=>60V<=>60P<=>70P<=>72V<=>75V<=>

E

## ⑤ OPTION mode

F

### ● Operation items

No.	Function/Display	Content	RS-232C
1	PEAK LIMITTER ⇄	Control Peak Limitter (Select ON/OFF)	—
2	EDID WRITE MODE ⇄	Control EDID WRITE MODE (Select DISABLE/ENABLE)	—
3	CH PRESET ⇄	USER ⇄ FACTORY	—

## ⑥ INITIALIZE mode

### ● Operation items

No.	Function/Display	Content	RS-232C
1	SYNC DET(+)	Only for the technical use.	—
2	SG MODE ⇔	Paired SG_MODE with SG_PATTERN. Select SG Route.	—
3	SG PATTERN ⇔	Paired SG_MODE with SG_PATTERN. Select SG Pattern.	—
4	SIDE MASK LEVEL(+)	Adjust Side Mask Color(R,G,B).	BSL GSL RSL
5	FINAL SETUP(+)	Initialize flash memories on virgin product status	FST
6	SR+ ⇔	Select SR+ mode or UART SELECT mode.	—
7	UART SELECT ⇔	Select boud Rate on RS-232C Communication	—
8	HDMI INTR POSITION(+)	Only for the technical use.	=

### 1. SYNC DET(+)

Only for the technical use.

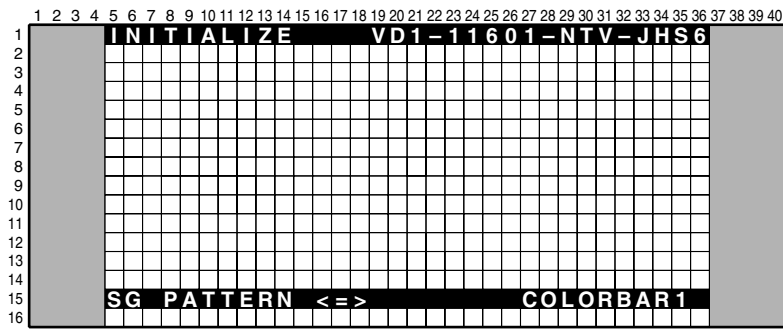
### 2. SG MODE

The route of the Test Signal from the MVDEC is chosen by this function.  
After setting this function, SG pattern should be set.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	INITIALIZE VD1-11601-NTV-JHS6																																						
2																																							
3																																							
4																																							
5																																							
6																																							
7																																							
8																																							
9																																							
10																																							
11																																							
12																																							
13																																							
14																																							
15	SG MODE <=> ANA-MVDEC-Y																																						
16																																							

No.	Display	Function
1	SG OFF	SG is set to OFF
2	DIG MVDEC YBCr	Digital output (YCbCr)
3	ANA MVDEC Y	Analog output to the Videio SW (Y)
4	ANA MVDEC RGB	SCART
5	ANA AD YBCr	Analog output to the RGB SW (YCbCr)
6	ANA AD RGB	Analog output to the RGB SW (RGB)

### 3. SG PATTERN

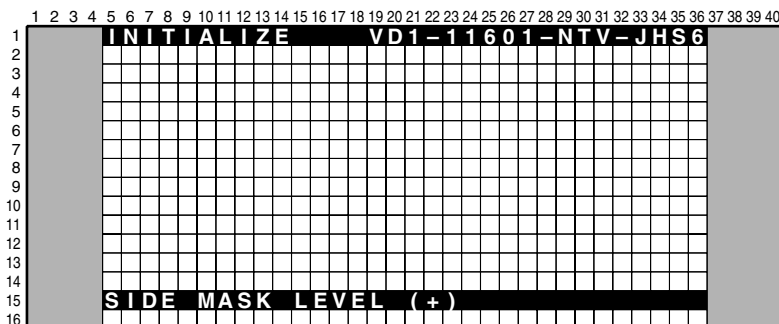


No.	Function/Display	SG Pattern (Brightness IRE Level/Color)	No.	Function/Display	SG Pattern (Brightness IRE Level/Color)
1	COLOR BAR1	Colorbar(75%)	11	RASTER4	Raster(75% Green)
2	COLOR BAR2	Colorbar(100%)	12	RASTER5	Raster(75% Magenta)
3	RAMP1	Ramp(100% white)	13	RASTER6	Raster(75% Red)
4	RAMP2	Ramp(100% Yellow)	14	RASTER7	Raster(75% Blue)
5	RAMP3	Ramp(75% Green)	15	RASTER8	Raster(-% Black)
6	RAMP4	Ramp(75% Red)	16	10STEP1	10STEP(100% white)
7	RAMP5	Ramp(75% Blue)	17	10STEP2	10STEP(100% Yellow)
8	RASTER1	Raster(100% White)	18	10STEP3	10STEP(75% Green)
9	RASTER2	Raster(75% Yellow)	19	10STEP4	10STEP(75% Red)
10	RASTER3	Raster(75% Cyanide)	20	10STEP5	10STEP(75% Blue)

#### Important notice of the Test Signal mode (SG mode, SG pattern)

- The route switching should be done correctly in the factory mode.
- Y or G signal from SG should be input to the AVI terminal of the MVDEC when the SG signal is output.
- The function of the blanking offset (50 IRE) should be OFF during the SG mode.
- The setting of the Y/C separation function should be set to the NTSC during the SG mode
- Only the RGB and Component signals can be output during SG mode, so only the Y signal is input at the CVBS and S signal mode, thus the picture is composed in black and white color. This isn't a trouble.
- The SG mode 5 (ANA AD RGB) is only for the factory mode. Therefore some problem (strange color, unstable brightness etc.) might be happened.

### 4. SIDE MASK LEVEL



Level of the side mask (R, G, and B) can be adjusted by using this menu.  
The input signal is necessary to adjust it.

No.	Display	Context	RS-232C
1	R MASK LEVEL ⇄	Adjust Side Mask R (range :000-255)	RSL
2	G MASK LEVEL ⇄	Adjust Side Mask G (range :000-255)	GSL
3	B MASK LEVEL ⇄	Adjust Side Mask B (range :000-255)	BSL

## 5. FINAL SETUP

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	INITIALIZE										VD1-11601-NTV-JHS6																													
2	FINAL SETUP																																							
3																																								
4																																								
5																																								
6																																								
7																																								
8																																								
9																																								
10																																								
11																																								
12																																								
13																																								
14																																								
15	DATA RESET										<=>										: NO																			
16																																								

The value of all memorized data are set to shipment status. If the ENTER key is kept on pressing for 5 second when the status of this menu is YES, final setup will be done.

## 6. SR+

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	INITIALIZE										VD1-11601-NTV-JHS6																													
2																																								
3																																								
4																																								
5																																								
6																																								
7																																								
8																																								
9																																								
10																																								
11																																								
12																																								
13																																								
14																																								
15	SR+										<=>										: ON																			
16																																								

When using RS-232C function, select SR+ OFF.

## 7. UART SELECT

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	INITIALIZE										VD1-11601-NTV-JHS6																													
2																																								
3																																								
4																																								
5																																								
6																																								
7																																								
8																																								
9																																								
10																																								
11																																								
12																																								
13																																								
14																																								
15	UART SELECT										<=>										: 9600BPS																			
16																																								

\* The bau-rate for SXE/RXE model is not valiabe like XDE/FDE model, but 9600bps fixed.

## 6.4 LIST OF RS-232C COMMANDS

A RS-232C commands can be used in Service Factory mode. Before using RS-232C commands, it is necessary to change the factory presetting.  
See "6.2 USING RS-232C COMMANDS".  
[Note ; If you want to see version infomation (ex. QS1, QS6, Factory, Menu), Please see 10 seconds after starting.]

### 1. RS-232C command for Main microcomputer

Command	Operation	Remarks
<b>B</b>		
BSL	Adjust side mask B	
<b>C</b>		
CNG	Clearing Main NG information	
CHR	Clearing Hour meter	
<b>D</b>		
DW*	Decreasing the adjustment value by*	*:1-9, 0(0 means 10),F(making the adjustment value the minimum)
<b>F</b>		
FAN	Turning Service Factory mode off.	
FAY	Turning Service Factory mode on.	
FST	Final Set Up	
<b>G</b>		
GSL	Adjusting side mask G	
<b>I</b>		
INA	Selection of tuner for terrestrial analog signals.	
INC***	Selection of tuner for terrestrial digital signals	436SXE model only    * : channel number
INPS01	Input selection: input 1	
INPS02	Input selection: input 2	
INPS03	Input selection: input 3	
INPS04	Input selection: input 4	
<b>O</b>		
OSDS00	Turning the On-Screen Display off	Prohibit On-Screen Display.
OSDS01	Turning the On-Screen Display on	Permit On-Screen Display.
<b>P</b>		
POF	Turning the power off.	
PON	Turning the power on.	
<b>Q</b>		
QS1	Obtaining the version data for each device.	
QS6	Obtaining the any version.	
QMT	Obtaining the MR temperature information.	
QNG	Obtaining NG data of the MR.	
<b>R</b>		
RSL	Adjustment od side mask R	
<b>U</b>		
UP*	Increasing the adjustment value by *	*:1-9, 0(0 means 10),F(making the adjustment value the maximum)
<b>Z</b>		
ZME	Initializing of the EEPROM video data	



## 2. RS-232C command for module microcomputer

Command Name		Function		Effective only in Factory mode	Remarks
<b>A</b>					
ABL	***	ABL ADJUSTMENT	Adjusting the upper limit of the power	○	
AMT	S00	AUDIO MUTE OFF	Turning off the audio muting		
	S01	AUDIO MUTE ON	Turning on the audio muting		
APW	S00	APL WB FUNCTION:OFF	WB correction interlocked with APL: OFF	○	
	S01	APL WB FUNCTION:ON	WB correction interlocked with APL: ON	○	
<b>B</b>					
BAL	***	BALANCE ADJUSTMENT	Audio balance adjustment		
BAS	***	BASS ADJUSTMENT	Audio bass adjustment		
BCP		BACKUP COPY	Copying the backup data in the EEPROM	○	
<b>C</b>					
CBU		CLEAR BACKUP	Clearing backup data	○	
CHM		CLEAR HOUR METER	Clearing data of the hour meter	○	Used only when the panel is replaced
CPC		CLEAR POWER ON COUNT	Clearing power-on count data	○	Used only when the power unit is replaced
CPD		CLEAR POWER DOWN	Clearing power-down information	○	Used only when the panel is replaced
CPM		CLEAR PLUSE METER	Clearing data of the pulse meter	○	Used only when the panel is replaced
CSD		CLEAR SHUT DOWN	Clearing MODULE shutdown information	○	Used only when the panel is replaced
<b>D</b>					
DRV	S00	DRIVE OFF	Sequence drive off		
	S01	DRIVE ON	Sequence drive on		
<b>E</b>					
ESV	S00	POWER CONTROL NORMAL	Setting Power Consumption mode to 4-split normal curve		
	S01	POWER CONTROL MODE1	Setting Power Consumption mode to 2-split normal curve		
	S02	POWER CONTROL MODE2	Setting Power Consumption mode to 2-split power-saving curve		
<b>F</b>					
FAJ		FINISH ADJUSTMENT	Determining the flag of the HD DIGITAL Assy adjustment in "adjustment is completed"	○	
FAN		FACTORY NO		○	
FAY		FACTORY YES	Entering Factory mode		Turning the mask setting off
FCS	S00	FOCUS OFF	Turning the FOCUS function off		
	S01	FOCUS ON	Turning the FOCUS function on		
<b>M</b>					
MKC	S00	MASK COMBINATION OFF	MASK off		
	S01	MASK COMBINATION 01	H ramp (slant 1) M	○	
	S02	MASK COMBINATION 02	H ramp (slant 4) M	○	
	S03	MASK COMBINATION 03	Slanting ramp M	○	
	S04	MASK COMBINATION 04	30 for aging	○	
	S05	MASK COMBINATION 05	05 for aging	○	
	S06	MASK COMBINATION 06	Erasing afterimage 1	○	
	S07	MASK COMBINATION 07	Erasing afterimage 2 (RGB: zigzag, V: reverse)	○	
	S08	MASK COMBINATION 08	White (change in luminance level)	○	
	S09	MASK COMBINATION 09	PEAK SEEK RASTER	○	
MKS	S00	MASK SINGLE OFF	MASK OFF		
	S01	MASK SINGLE 1	H ramp (slant 1)	○	
	S02	MASK SINGLE 2	H ramp (slant 4)	○	
	S03	MASK SINGLE 3	V ramp (slant 1)	○	
	S04	MASK SINGLE 4	Slanting ramp	○	

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Command Name		Function		Effective only in Factory mode	Remarks
MKS	S05	MASK SINGLE 5	Window(Hi=870Lo=102)	○	
	S06	MASK SINGLE 6	Window(Hi=1023Lo=102)	○	
	S07	MASK SINGLE 7	Window(Hi=1023)	○	
	S08	MASK SINGLE 8	Window(Hi=1023)4%	○	
	S09	MASK SINGLE 9	Window(Hi=1023)1.25%	○	
	S10	MASK SINGLE 10	Window(1/7LINE)	○	
	S11	MASK SINGLE 11	STRIPE(MGT/GRN)	○	
	S12	MASK SINGLE 12	STRIPE(GRN/MGT)	○	
	S13	MASK SINGLE 13	B & W, checker (1 line)	○	
	S14	MASK SINGLE 14	B & W, checker (2 lines)	○	
	S15	MASK SINGLE 15	B & W, checker (4 lines)	○	
	S16	MASK SINGLE 16	B & W, checker (8 lines)	○	
	S17	MASK SINGLE 17	COLOR BAR	○	
	S18	MASK SINGLE 18	Slanting lines	○	
	S19	MASK SINGLE 19	Red & black, checker (1 line)	○	
	S20	MASK SINGLE 20	Red & black, checker (2 lines)	○	
	S21	MASK SINGLE 21	Red & black, checker (4 ines)	○	
	S22	MASK SINGLE 22	Red & black, checker (8 lines)	○	
S23	S23	MASK SINGLE 23	RGB zigzag, V reverse	○	
	S24	MASK SINGLE 24	SUS 2000 pulses (black raster)	○	
	S25	MASK SINGLE 25	Window(Hi=870Lo=102) PATTAN3	○	
	S26	MASK SINGLE 26	Window(Hi=1023Lo=102) PATTAN3	○	
	S27	MASK SINGLE 27	Window(Hi=1023) Pattern 3	○	
	S28	MASK SINGLE 28	Window(Hi=1023)4% Pattern 3	○	
	S29	MASK SINGLE 29	Window(Hi=1023)1.25% Pattern 3	○	
	S30	MASK SINGLE 30	Window(1/7LINE) Pattern 3	○	
	S51	MASK SINGLE 51	Raster - White	○	
	S52	MASK SINGLE 52	Raster - Red	○	
	S53	MASK SINGLE 53	Raster - Green	○	
	S54	MASK SINGLE 54	Raster - Blue	○	
	S55	MASK SINGLE 55	Raster - Black	○	
	S56	MASK SINGLE 56	Raster - Cyan	○	
	S57	MASK SINGLE 57	Raster - Magenta	○	
	S58	MASK SINGLE 58	Raster - Yellow	○	
	S59	MASK SINGLE 59	Raster - Cyan 460 :W	○	
S60	S60	MASK SINGLE 60	Raster - Green 774 :W	○	
	S61	MASK SINGLE 61	Raster - Gray 912 :W	○	
	S62	MASK SINGLE 62	Raster - Yellow egg color: W	○	
	S63	MASK SINGLE 63	Raster - Beige: W	○	
	S64	MASK SINGLE 64	Raster - Sky color: W	○	
	S65	MASK SINGLE 65	Raster - Pale purple: W	○	
	S66	MASK SINGLE 66	Raster - Magenta 54 :W	○	
	S67	MASK SINGLE 67	Raster - Red 588	○	
	S68	MASK SINGLE 68	Red 1023 + $\alpha$	○	
	S69	MASK SINGLE 69	Green 1023 + $\alpha$	○	
	S70	MASK SINGLE 70	Blue 1023 + $\alpha$	○	
	S71	MASK SINGLE 71	Red 588 + $\alpha$	○	
	S72	MASK SINGLE 72	Green 588 + $\alpha$	○	
	S73	MASK SINGLE 73	Blue 588 + $\alpha$	○	

Command Name		Function		Effective only in Factory mode	Remarks
MKS	S74	MASK SINGLE 74	Raster -Gray 512 (reservation)	○	
P					
PAV	S**	PANEL AV MODE	Switching panel functions interlocked with the AV selection		
PBH	***	PANEL BLUE HIGH	Panel white balance adjustment - Blue highlight	○	
PBL	***	PANEL BLUE LOW	Panel white balance adjustment - Blue low light	○	
PDM	S00	PD MUTE OFF	Passing PD signals to the Power SUPPLY Unit => Power-down		
	S01	PD MUTE ON	Not passing PD signals to the Power SUPPLY Unit => No power-down		
PFN		FACTORY NO	PANEL FACTORY mode: off	○	
PFS		PANEL FINAL SETUP	Panel Setup at shipment	○	
PFY		FACTORY YES	PANEL FACTORY mode: on		
PGH	***	PANEL GREEN HIGH	Panel white balance adjustment - Green highlight	○	
PGL	***	PANEL GREEN LOW	Panel white balance adjustment - Green low light	○	
PGM	S**	PANEL GAMMA	Panel Setting of the gamma table		
PMT	S00	MUTE OFF	Canceling panel muting		
	S01	MUTE ON	Panel muting		
POF		POWER OFF	Power off		
PON		POWER ON	Power on		
PPT	S00	PANEL PROTECT OFF	Panel protection: off	○	
	S01	PANEL PROTECT ON	Panel protection: on	○	
PUC	S00	PUER CINEMA:OFF	Pure cinema: off		
	S01	PUER CINEMA:STD	Pure cinema: standard		
	S02	PUER CINEMA:ADV	Pure cinema: advanced		
Q					
QAJ		QUEST ADJUSTMENT	Acquiring various adjustment values		
QIP		QUEST PANEL INFORMATION	Acquiring various input signal data		
QPD		QUEST POWER-DOWN	Acquiring logs of power-down points		
QPM		QUEST PULSE METER	Acquiring data of the pulse meter		
QPW		QUEST PANEL WHITE BALANCE	Acquiring panel white balance adjustment values		
QS1		QUEST STATUS 1	Acquiring data on the unit, such as the version of the program		
QS2		QUEST STATUS 2	Acquiring data on the status of the unit, such as temperature		
QSD		QUEST SHUT DOWN	Acquiring data on Panel shutdown		
QSI		QUEST SIGNAL INFORMATION	Acquiring data related with signals		
R					
RBL	S**	PANEL REVISE BLUE LEVEL	Setting of blue level for panel degradation correction	○	
RGL	S**	PANEL REVISE GREEN LEVEL	Setting of green level for panel degradation correction	○	
RHI	***	RED HIGH	User white balance - Red highlight		
RLW	***	RED LOW	User white balance - Red low light		
RRL	S**	PANEL REVISE RED LEVEL	Setting of red level for panel degradation correction	○	
RSW	***	XY-RST-W ADJ	Adjustment of the width of XY reset pulse	○	
S					
SDM	S00	SD MUTE OFF	Shutdown enabled		
	S01	SD MUTE ON	Shutdown prohibited		
SFR	S01	SUS FREQUENCY MODE1	Measures against AM radio noise - Pattern 1	○	
	S02	SUS FREQUENCY MODE2	Measures against AM radio noise - Pattern 2	○	
	S03	SUS FREQUENCY MODE3	Measures against AM radio noise - Pattern 3	○	
	S04	SUS FREQUENCY MODE4	Measures against AM radio noise - Pattern 4	○	
	S05	SUS FREQUENCY MODE5	Measures against AM radio noise - Pattern 5	○	
	S06	SUS FREQUENCY MODE6	Measures against AM radio noise - Pattern 6	○	
	S07	SUS FREQUENCY MODE7	Measures against AM radio noise - Pattern 7	○	

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Command Name		Function		Effective only in Factory mode	Remarks
SFR	S08	SUS FREQUENCY MODE8	Measures against AM radio noise - Pattern 8	○	
SMM	S**	SIDE MASK MODE	Setting of the effective area during streaking correction	○	
SN0	***	SERIAL NO 0	Setting of the serial No. 0 (panel)	○	
SN1	***	SERIAL NO 1	Setting of the serial No. 1 (panel)	○	
SN2	***	SERIAL NO 2	Setting of the serial No. 2 (panel)	○	
SN3	***	SERIAL NO 3	Setting of the serial No. 3 (panel)	○	
SN4	***	SERIAL NO 4	Setting of the serial No. 4 (panel)	○	
SRS	S00	SRS OFF	SRS function: off		
	S01	SRS ON	SRS function: on		
T					
TBS	S00	TRUBASS OFF	TruBass function: off		
	S01	TRUBASS ON	TruBass function: on		
TRE	***	TREBLE ADJUSTMENT	Audio treble adjustment		
U					
UAJ		UN-ADJUSTMENT	Determining the flag for the OB DIGITAL Assy adjustment in "not adjusted"	○	
V					
VFQ	S01	FREQUENCY VIDEO 48Hz	Setting the frequency in Mask mode to VD-48 Hz	○	
	S02	FREQUENCY VIDEO 50Hz	Setting the frequency in Mask mode to VD-50 Hz	○	
	S03	FREQUENCY VIDEO 60Hz	Setting the frequency in Mask mode to VD-60 Hz	○	
	S05	FREQUENCY THEATER 72Hz	Setting the frequency in Mask mode to VD-72 Hz	○	
	S06	FREQUENCY 75Hz	Setting the frequency in Mask mode to VD-75 Hz	○	
	S13	FREQUENCY PC 60Hz	Setting the frequency in Mask mode to PC-60 Hz	○	
	S14	FREQUENCY PC 70Hz	Setting the frequency in Mask mode to PC-70 Hz	○	
	S22	FREQUENCY VIDEO 50Hz NONSTD	Setting the frequency in Mask mode to VD-50 Hz (nonstandard)	○	
	S23	FREQUENCY VIDEO 60Hz NONSTD	Setting the frequency in Mask mode to VD-60 Hz (nonstandard)	○	
	S25	FREQUENCY VIDEO 72Hz NONSTD	Setting the frequency in Mask mode to VD-72 Hz (nonstandard)	○	
	S26	FREQUENCY VIDEO 75Hz NONSTD	Setting the frequency in Mask mode to VD-75 Hz (nonstandard)	○	
VOF	***	Vofs ADJUSTMENT	Adjustment of the reference value of Vofs voltage	○	
VOL	***	VOLUME	Audio volume adjustment		
VRP	***	Vrp ADJUSTMENT	Adjustment of the reference value of Vrst-p voltage	○	
VSU	***	Vsus ADJUSTMENT	Adjustment of the reference value of Vsus voltage	○	
W					
WBI	S00	WB INITIALIZE NO	Panel WB standard output mode: off	○	
WBI	S01	WB INITIALIZE YES	Panel WB standard output mode: on	○	
X					
XSB	***	X-SUS-B ADJ	X-SUS-B ADJ	○	
Y					
YSB	***	Y-SUS-B ADJ	Y-SUS-B ADJ	○	
YTG	***	Y-SUSTAIL ADJ	Y-SUSTAIL ADJ	○	
YTW	***	Y-SUSTAIL W ADJ	Y-SUSTAIL W ADJ	○	

## 6.5 OUTLINE OF COMMANDS

**QS1:** Returning information on the module and the version of the software.

Order	Part	Data Content	Size	Remarks
0	-	Received Command Name	3 byte	'QS1' only
1	DIGITAL	Display Information 1	1 byte	
2		Display Information 2	1 byte	
3		Display Information 3	1 byte	
4		Display Information 4	1 byte	
5		Display Information 5	1 byte	
6		Boot Version of Module microcomputer.	3 byte	
7		Program Version of Module microcomputer.	8 byte	
8		Boot Version of ASTRA MANTA	3 byte	
9		Program Version of ASTRA MANTA	8 byte	
10		Sequence Version (43VIDEO)	4 byte	
11		Sequence Version (43PC)	4 byte	
12		Sequence Version (50VIDEO)	4 byte	
13		Sequence Version (50PC)	4 byte	
14	MAIN	, (comma)	1 byte	
15		Product Information 1	1 byte	
16		Product Information 2	1 byte	
17		Product Information 3	1 byte	
18		Product Information 4	1 byte	
19		Version of IF microcomputer	4 byte	
20		Version of Main microcomputer	8 byte	
21		Boot Version of Main microcomputer	4 byte	
22		Program Version of CARRERA-MANTA	8 byte	
23		Boot Data Version of CARRERA-MANTA (DAT)	4 byte	
24		GUI Data Version of CARRERA-MANTA (GUI-DAT)	8 byte	
25		Enhanced Data Version of CARRERA-MANTA (WID-DAT)	8 byte	
26		PIC Data Version of CARRERA-MANTA (PIC-DAT)	8 byte	

**QS6:** Returning information of the Flash Device.

Order	Data Content	Size	Remarks
0	Received Command Name	3 byte	'QS6' only
1	Version of DTB (PDP-436SX only)	4 byte	
2	Version of PC Card	8 byte	All " 0 "
3	Version of Text	60 byte	
4	User Password	4 byte	

**QMT:** Returning information of temperature and FAN speed.

Order	Data Content	Size	Remark
1	Received Command Name	3 byte	'QMT' only
2	Temperature	3 byte	
3	FAN Information	1 byte	0: STOP 1: MIN 2: MAX

A

**QNG:** Returning data (logs keep on Main microcomputer) on shutdown of Main ASSY.

Order	Data	Size	Context
0	Received Command Name	3 byte	'QNG' only
1	Latest NG data	1 byte	
2	Data of subcategory for the latest NG	1 byte	
3	Data of hour meter for the latest NG	7 byte	
4	Data of temperature for the latest NG	3 byte	
5	2nd latest NG data	1 byte	
6	Data of subcategory for the 2nd latest NG	1 byte	
7	Data of hour meter for the 2nd latest NG	7 byte	
8	Data of temperature for the 2nd latest NG	3 byte	
:	:	:	
29	8th latest NG data	1 byte	
30	Data of subcategory for the 8th latest NG	1 byte	
31	Data of hour meter for the 8th latest NG	7 byte	
32	Data of temperature for the 8th latest NG	3 byte	

B

C

• Details on the NG data and subcategory

Data	Cause of Shutdown	Remarks
0	Normal	
1	Failure of communication to Module microcomputer	
2	3-wire Serial Communication of Main microcomputer.	Subcategory ⇒ 1
3	IIC Communication failure of Main microcomputer	Subcategory ⇒ 2
4	Communication failure of Main microcomputer &Unknown Error	
5	Fan stopped	
6	Abnormally high temperature	
7	Failure of Digital Tuner	Subcategory ⇒ 3
8	Abnormality in ASIC power line (DC-DC)	

D

• Data on Subcategories for failure in 3-wire serial communication of Main microcomputer (subcategory 1)

Data	Cause of Shutdown	Remarks
0	Non subcategory	
1	Communication failure of IF microcomputer	Power OFF
2	MANTA communication failure(MULIT1)	Power OFF
3	MANTA communication failure(MULIT2)	Reserved
4	MANTA communication failure(I/P)	
5	MANTA communication failure(D-SEL)	

E

F

• Data on Subcategories for failure in IIC communication of Main microcomputer (subcategory 2)

Data	Cause of Shutdown	Data	Cause of Shutdown
0	Non subcategory	A	AD/PLL
1	Analog Tuner 1(Front End 1)	B	HDMI
2	–	C	TMDS Tx
3	MPX	D	TMDS Rx
4	AV Switch	E	M2 Communication
5	RGB Switch	F	M2 Busy
6	CCD	G	64k EEPROM
7	GCR		
8	Main VDEC		
9	–		

• Data on Subcategories for failure in the DTB communication of Main microcomputer (subcategory 3)

Data	Cause of Shutdown	Remarks
0	Non subcategory	
1	Failure to DTB Starting	
2	Communication failure to DTB	

A

### ■ Acquisition of panel operation data ••• [QS2]

The command QS2 is for acquiring data on the panel's operations. Basically, this command is used for the module's microcomputer to inform the main unit's microcomputer of changes in panel operation.

Command Format	Effective Operation Modes	Function	Remarks
[QS2]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+23(DATA)+2(CS)=28Byte

B

Data Arrangement		Data Length	Output Example
ECO		3Byte	QS2
1	Notification of mode shifting to STB	1Byte	1
2	Flag for adjustment of the panel unit	1Byte	0
3	Flag for adjustment-data backup	1Byte	0
4	"1st PD" data	1Byte	0
5	"2nd PD" data	1Byte	0
6	Reservation	3Byte	***
7	Temperature data (TEMP 1)	3Byte	128
8	SD main data	1Byte	0
9	SD subdata	1Byte	0
10	Operation status induced by SD	1Byte	0
11	Data from the hour meter	8Byte	00000259
12	MASK indication	1Byte	0
CS		2Byte	4A

C

**Note :** "00000259" of "Data from the hour meter" means 2 hours 59 minuts.

D

● Notification of mode shifting to Standby	
0	Disable to transfer to Standby mode
1	Able to transfer to Standby mode

● Adjustment of the panel unit	
0	Adjustment completed
1	Adjustment not completed

● Adjustment-data backup	
0	With backup data
1	No data

E

● PD data	
0	No PD data
1	Not used
2	POWER
3	SCAN
4	SCN-5V
5	Not used
6	Y-DCDC
7	Y-SUS
8	ADRS
9	X-DRV
A	X-DCDC
B	X-SUS
C	Not used
D	SQ-IC
E	Not used
F	Specification inability

● SD main data	
0	No SD
1	SQ-IC
2	MDU-IIC
3	RST2
4	Panel having high temperature
5	Short-circuited speaker

● SD subdata (IIC)	
0	No SD subdata
1	EEPROM
2	BACKUP
3	DAC
4	VOL IC
5	DVI

● Operation status induced by SD	
0	Normal
1	Relay-off completed
2	During warning indication

● MASK indication	
0	MASK-OFF
1	MASK-ON

F



### ■ Acquisition of other data on the panel ••• [QIP]

The command QIP is for acquiring data other than those available with QS1 (data necessary before turning the power on) and QS2 (data to inform of operational status change).

Command Format	Effective Operation Modes	Function	Remarks
[QIP]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+39(DATA)+2(CS)=44Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QIP
1	SERIAL	15Byte	-----
2	HOURLY METER	8Byte	00000000
3	BACKUP HR MTR	8Byte	00000000
4	PON COUNTER	8Byte	00000000
CS		2Byte	94

**Note :** " Serial number" is not inputted in this model.

### ■ Acquisition of panel adjustment data (common data) ••• [QAJ]

The command QAJ is for acquiring data on the panel's factory-preset items that are common to the main unit and that share the same memory.

Command Format	Effective Operation Modes	Function	Remarks
[QAJ]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+27(DATA)+2(CS)=32Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QAJ
1	V-SUS adjustment value	3Byte	128
2	V-OFT adjustment value	3Byte	128
3	V-RST-P adjustment value	3Byte	128
4	XSB adjustment value	3Byte	128
5	YSB adjustment value	3Byte	128
6	YTG adjustment value	3Byte	128
7	YTW adjustment value	3Byte	128
8	RSW adjustment value	3Byte	128
9	R-RIVISE setting value	1Byte	0
10	G-RIVISE setting value	1Byte	0
11	B-RIVISE setting value	1Byte	0
CS		2Byte	B7

A

### ■ Acquisition of ABL/WB adjustment data ••• [QPW]

The command QPW is for acquiring data on the panel's factory-preset items whose memory tables are changed in sequence.

Command Format	Effective Operation Modes	Function	Remarks
[QPW]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+35(DATA)+2(CS)=40Byte

B

Data Arrangement		Data Length	Output Example
ECO		3Byte	QPW
1	Drive sequence	3Byte	60V
2	Standard/nonstandard	1Byte	S
3	Type of ABL/WB tables	2Byte	T2
4	ABL adjustment value	3Byte	128
5	R-HIGH adjustment value	3Byte	256
6	G-HIGH adjustment value	3Byte	256
7	B-HIGH adjustment value	3Byte	256
8	R-LOW adjustment value	3Byte	512
9	G-LOW adjustment value	3Byte	512
10	B-LOW adjustment value	3Byte	512
11	Gamma setting	1Byte	A
12	Streaking correction	1Byte	1
13	Peripheral luminance correction	1Byte	0
14	Reservation	1Byte	*
15	WB interlocked with APL	1Byte	0
16	Transition of protective operations	1Byte	0
17	Reservation	2Byte	**
CS		2Byte	37

● Drive sequence	
48V	Video48 Hz
50V	Video50 Hz
60V	Video60 Hz
72V	Video72 Hz
75V	Video75 Hz
60P	PC60Hz
70P	PC70Hz

● Setting for Items 12 and 15	
0	OFF
1	ON

● Peripheral luminance correction	
0	OFF
2	ON (interlocked with APL)

● Standard/nonstandard	
S	Standard
N	Nonstandard

● Transition of brightness by protective operations	
0	Upper limit state for brightness
1	Brightness being reduced
2	Lower limit state for brightness
3	Brightness being increased

● Gamma setting	
n	0 to F

● Type of ABL/WB tables	
Tn	n: 1 to 4

C

D

### ■ Acquisition of parameters ••• [QPM]

The command QPM is for acquiring the accumulated number of pulses for each of 5 blocks from the EEPROM.

Command Format	Effective Operation Modes	Function	Remarks
[QPM]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+40(DATA)+2(CS)=45Byte

E

Data Arrangement		Data Length	Output Example
ECO		3Byte	QPM
1	Pulse meter B 1	8Byte	00000000
2	Pulse meter B 2	8Byte	00000000
3	Pulse meter B 3	8Byte	00000000
4	Pulse meter B 4	8Byte	00000000
5	Pulse meter B 5	8Byte	00000000
CS		2Byte	E7

F

- The output data on the accumulated number of pulses for each block are calculated in the following way: the high-order 4 bytes of the accumulated number of pulses for each block are converted into a decimal number, and the high-order 8 digits are transmitted. The unit of each block is M\_pulse (mega).

### ■ Acquisition of PD logs ••• [QPD]

The command QPD is for acquiring data from the 8 latest power-down (PD) logs.

Command Format	Effective Operation Modes	Function	Remarks
[QPD]	All operations	To acquire data on the power-down logs	Return data: 3 (ECO)+80(DATA)+2(CS)=85Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QPD
1	Latest "1st PD" data	1byte	A
2	Latest "2nd PD" data	1byte	2
3	Data from the hour meter for the latest PD	8byte	00010020
4	Second latest "1st PD" data	1byte	E
5	Second latest "2nd PD" data	1byte	9
6	Data from the hour meter for the second latest PD	8byte	00008523
7	Third latest "1st PD" data	1byte	4
8	Third latest "2nd PD" data	1byte	3
9	Data from the hour meter for the third latest PD	8byte	00004335
10	Fourth latest "1st PD" data	1byte	2
11	Fourth latest "2nd PD" data	1byte	0
12	Data from the hour meter for the fourth latest PD	8byte	00000945
13	Fifth latest "1st PD" data	1byte	4
14	Fifth latest "2nd PD" data	1byte	0
15	Data from the hour meter for the fifth latest PD	8byte	00000715
16	Sixth latest "1st PD" data	1byte	A
17	Sixth latest "2nd PD" data	1byte	2
18	Data from the hour meter for the sixth latest PD	8byte	00000552
19	Seventh latest "1st PD" data	1byte	A
20	Seventh latest "2nd PD" data	1byte	0
21	Data from the hour meter for the seventh latest PD	8byte	00000213
22	Eighth latest "1st PD" data	1byte	D
23	Eighth latest "2nd PD" data	1byte	0
24	Data from the hour meter for the eighth latest PD	8byte	000001A7
CS		2Byte	27

● PD data	
0	No PD
1	Not used
2	P-POWER
3	SCAN
4	SCN-5V
5	Not used
6	Y-DCDC
7	Y-SUS
8	Address
9	X-DRIVE
A	X-DCDC
B	X-SUS
C	DIG-DCDC
D	QS (driving stopped)
E	Not used
F	Specification inability

## A ■ Acquisition of SD logs ••• [QSD]

The command QSD is for acquiring the data from the 8 latest shutdown (SD) logs.

Command Format	Effective Operation Modes	Function	Remarks
[QSD]	All operations	To acquire data on the shutdown logs	Return data: 3 (ECO)+80(DATA)+2(CS)=85Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QSD
1	Latest SD data	1byte	1
2	Latest SD subcategory data	1byte	0
3	Data from the hour meter for the latest SD	8byte	00752013
4	Second latest SD data	1byte	5
5	Second latest SD subcategory data	1byte	0
6	Data from the hour meter for the second latest SD	8byte	00495204
7	Third latest SD data	1byte	2
8	Third latest SD subcategory data	1byte	3
9	Data from the hour meter for the third latest SD	8byte	00100355
10	Fourth latest SD data	1byte	2
11	Fourth latest SD subcategory data	1byte	5
12	Data from the hour meter for the fourth latest SD	8byte	00075620
13	Fifth latest SD data	1byte	1
14	Fifth latest SD subcategory data	1byte	0
15	Data from the hour meter for the fifth latest SD	8byte	00000852
16	Sixth latest SD data	1byte	2
17	Sixth latest SD subcategory data	1byte	5
18	Data from the hour meter for the sixth latest SD	8byte	000000451
19	Seventh latest SD data	1byte	0
20	Seventh latest SD subcategory data	1byte	0
21	Data from the hour meter for the seventh latest SD	8byte	00000000
22	Eighth latest SD data	1byte	0
23	Eighth latest SD subcategory data	1byte	0
24	Data from the hour meter for the eighth latest SD	8byte	00000000
CS		2Byte	7D

### ● SD data

0	No SD
1	SQ-IC
2	MDU-IIC
3	RST2
4	Panel having high temperature
5	Short-circuited speaker

### ● SD subcategory

0	No SD subcategory
1	EEPROM
2	BACKUP
3	DAC
4	VOL-IC
5	DVI
6	Not used

## ■ Acquisition of input signal data • • • [QSI]

The command QSI is for acquiring all data on input video signals.

Command Format	Effective Operation Modes	Function	Remarks
[QSI]	All operations	To acquire all data on input video signals	Return data: 3 (ECO)+66(DATA)+2(CS)=71Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QSI
1	Type of drive sequence	3byte	60V
2	Standard/nonstandard	1byte	S
3	Type of ABL/WB tables	2byte	T1
4	Total value of PCN	4byte	0256
5	Total value of PRH	4byte	0256
6	Total value of PGH	4byte	0256
7	Total value of PBH	4byte	0256
8	Total value of PBR	4byte	0512
9	Total value of PRL	4byte	0512
10	Total value of PGL	4byte	0512
11	Total value of PBL	4byte	0512
12	Reservation	2byte	**
13	Detection of existence of H	1byte	Y
14	Detection of V frequency	4byte	6002
15	Reservation	4byte	****
16	Obtained APL data	4byte	1023
17	Number of SUS pulses	4byte	0457
18	Result of detection of still picture	1byte	1
19	Result of detection of cracking in the panel	1byte	1
20	Result of detection for scanning protection	1byte	1
21	Result of detection for external protection	1byte	1
22	Transition of protection operation	1byte	0
23	Reservation	4byte	****
CS		2Byte	27

### ● Detection of existence of H

N	No H
Y	H detected

### ● Transition of brightness by protection operation

0	Upper limit state for brightness
1	Brightness being reduced
2	Lower limit state for brightness
3	Brightness being increased

- If data for an item cannot be obtained during Standby mode, the return data for that item will be "\*."
- The types of data for Items 1-3 in the table (drive sequence, standard/nonstandard, and type of ABL/WB tables) are the same as with the command QPW.
- Each total value for Items 4-11 represents that of panel WB, user WB, and degradation correction, and the actual data being sent to the ASTRA are output.
- Detection of V frequency: The V signal input to the panel is measured in the range of 30.51 to 99.99 Hz. The measured value is multiplied by 100 and then output.
- Number of SUS pulses : The number is calculated from data from APL and the drive sequence. The output value must be between 0174 and 2752.
- APL value: The APL value for the input video signal (or mask indication) will be output in the range of 0000 to 1023.

A

### ■ Setting for Factory mode permission/prohibition • • • [FAY/FAN] [PFY/PFN]

The commands FAY/FAN and PFY/PFN are for prohibiting/permitting panel-adjustment commands during normal operation and are to be used to avoid accidental change of panel adjustment values.

Command Format	Operation		Remarks
	Effective Operation Modes	Control (by the microcomputer itself)	
[FAY]	Normal operation mode while the power is on	Adjustment mode: ON	Mask indications will be forcibly turned off.
[PFY]			With a PFY command, the mask does not change.
[FAN]	During FAY	Adjustment mode: OFF	
[PFN]			

B

- Commands that are effective during normal operation will also be effective during FAY (PFY) mode.

#### Note:

- The functions shown below will be forcibly switched when Mask ON/OFF is switched. (Even if the panel is off, changed settings will be retained.)  
While the status of Mask ON or OFF is maintained, if settings for the individual functions shown in ① and ② are changed, those settings are retained (even if the drive frequency is changed).

C

#### ① Functions related to picture quality

Function	Setting while Mask is ON	Setting while Mask is OFF	Remarks
Peripheral luminance correction	OFF	ON	
WB correction interlocked with APL	OFF	ON	
Streaking correction	OFF	ON	

D

#### ② Functions related to panel protection

Function	Setting while Mask is ON	Setting while Mask is OFF	Remarks
Detection of still picture	OFF	ON	
Detection of cracking in the panel	OFF	ON	
Scanning protection	OFF	ON	

- Depending on the type of mask displayed, phosphor burn of the panel may occur. As the panel-protection function is forcibly turned off with this model, care must be taken when color-bar signals are to be displayed for an extended period.

E

F

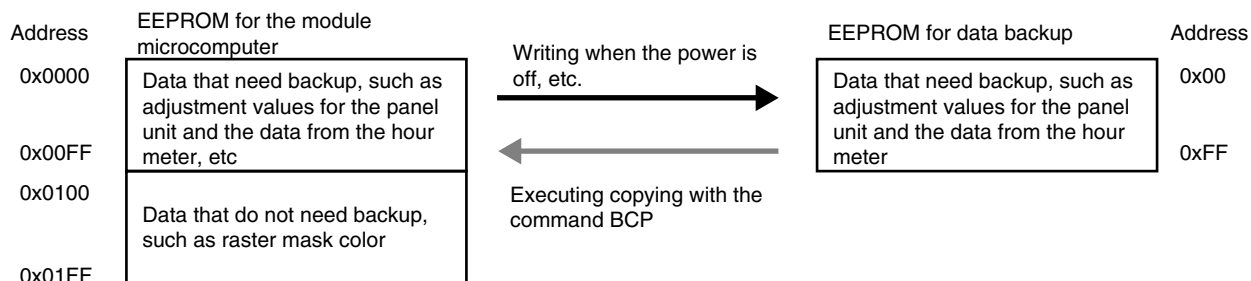
## ■ Backup function for adjustment values for the panel unit • • • [FAJ/UAJ/CBU/BCP]

When the OB DIGITAL Assy is to be replaced, adjustment values can be copied from the backup EEPROM to the EEPROM of the Assy for service.

Command Format	Operation			Remarks
	Effective Operation Modes	Control (by the microcomputer itself)		
[FAJ]	During FAY	To make the flag setting that indicating that adjustment of the panel unit has been completed	Writing 00 to the 4-kbyte ROM and copying to the 2-kbyte ROM	This takes at least 350 ms.
[UAJ]		To make the flag setting that indicating that adjustment of the main unit has not been completed	Writing F0 to the 4-kbyte ROM	
[CBU]		To make the flag setting that indicating that backup data have not been copied	Writing F0 to the 2-kbyte ROM	The backup ROM is initialized.
[BCP]		To copy Digital backup data to EEPROM	Copying backup data	

When the flag indicating that the production line adjustments (SUS waveform, voltage margin, and panel WB) for the panel unit have been completed is set to on, data stored from Addresses 0x0000 to 0X00FF in the digital EEPROM are copied to the same addresses of the backup EEPROM. Copying will be executed immediately before the relay of normal operation is off.

- When the command BCP is received while a warning indicating that backup copying has not been completed is displayed (conditions: Digital EEPROM = not adjusted, and backup EEPROM = adjusted), backed-up data will be copied to the Digital EEPROM, and various adjustment values related to Factory mode will be readjusted. Then LED warning indication will be shut off, and normal LED indication will be restored.
- If the backup EEPROM has not been adjusted when the command BCP is received (0x0063 is not written to all three addresses of the key data), copying of the backup data is not possible, and "XXX" is returned.



### Note:

- When the command FAJ, UAJ, or CBU is executed, only high-order one-byte (0x00 or 0xF0) key data will be written to the EEPROM, and lower-order one-byte (0x63) data will not be changed.
- It takes at least 350 ms from reception of the command FAJ until an echo is sent back, because data are copied to the backup EEPROM.

A

### ■ Adjustments of Vofs voltage and Vyprst voltage

Note: Enter the values, using an RS-232C command or the Factory Menu.



- Reference adjustment of the Vofs voltage: Ex. "Vofs = 35" → (Check the conversion chart.) Enter "VOF112."
- Reference adjustment of the Vyprst voltage: Ex. 50-inch "Vyprst = 270 V" → (Check the conversion chart.) Enter "VRP055."

(Note that the conversion charts for 50-inch and 43-inch Panels are different.)

## C

D

■ **Clearing data on various histories of the Panel, such as those on the hour meter**

- There are two types of hour meters. Do not take the MR hour meter for the hour meter.

## F

4 To clear the data on the PD history : CPD

See "7.1.6 HOW TO CLEAR HISTORY DATA."

F



## ■ Conversion charts for electronic VRs: Conversion chart for the Vofs

Conversion chart for the Vofs (Commands vs. voltage values)									
Command	Voltage value [V]	Command	Voltage value [V]	Command	Voltage value [V]	Command	Voltage value [V]	Command	Voltage value [V]
VOF000	14.09	VOF056	24.55	VOF112	35.01	VOF168	45.47	VOF224	55.93
VOF001	14.28	VOF057	24.74	VOF113	35.20	VOF169	45.66	VOF225	56.12
VOF002	14.46	VOF058	24.92	VOF114	35.38	VOF170	45.85	VOF226	56.31
VOF003	14.65	VOF059	25.11	VOF115	35.57	VOF171	46.03	VOF227	56.49
VOF004	14.84	VOF060	25.30	VOF116	35.76	VOF172	46.22	VOF228	56.68
VOF005	15.02	VOF061	25.48	VOF117	35.95	VOF173	46.41	VOF229	56.87
VOF006	15.21	VOF062	25.67	VOF118	36.13	VOF174	46.59	VOF230	57.05
VOF007	15.40	VOF063	25.86	VOF119	36.32	VOF175	46.78	VOF231	57.24
VOF008	15.58	VOF064	26.04	VOF120	36.51	VOF176	46.97	VOF232	57.43
VOF009	15.77	VOF065	26.23	VOF121	36.69	VOF177	47.15	VOF233	57.61
VOF010	15.96	VOF066	26.42	VOF122	36.88	VOF178	47.34	VOF234	57.80
VOF011	16.14	VOF067	26.61	VOF123	37.07	VOF179	47.53	VOF235	57.99
VOF012	16.33	VOF068	26.79	VOF124	37.25	VOF180	47.71	VOF236	58.17
VOF013	16.52	VOF069	26.98	VOF125	37.44	VOF181	47.90	VOF237	58.36
VOF014	16.70	VOF070	27.17	VOF126	37.63	VOF182	48.09	VOF238	58.55
VOF015	16.89	VOF071	27.35	VOF127	37.81	VOF183	48.27	VOF239	58.73
VOF016	17.08	VOF072	27.54	VOF128	38.00	VOF184	48.46	VOF240	58.92
VOF017	17.27	VOF073	27.73	VOF129	38.19	VOF185	48.65	VOF241	59.11
VOF018	17.45	VOF074	27.91	VOF130	38.37	VOF186	48.83	VOF242	59.30
VOF019	17.64	VOF075	28.10	VOF131	38.56	VOF187	49.02	VOF243	59.48
VOF020	17.83	VOF076	28.29	VOF132	38.75	VOF188	49.21	VOF244	59.67
VOF021	18.01	VOF077	28.47	VOF133	38.93	VOF189	49.39	VOF245	59.86
VOF022	18.20	VOF078	28.66	VOF134	39.12	VOF190	49.58	VOF246	60.04
VOF023	18.39	VOF079	28.85	VOF135	39.31	VOF191	49.77	VOF247	60.23
VOF024	18.57	VOF080	29.03	VOF136	39.49	VOF192	49.96	VOF248	60.42
VOF025	18.76	VOF081	29.22	VOF137	39.68	VOF193	50.14	VOF249	60.60
VOF026	18.95	VOF082	29.41	VOF138	39.87	VOF194	50.33	VOF250	60.79
VOF027	19.13	VOF083	29.59	VOF139	40.05	VOF195	50.52	VOF251	60.98
VOF028	19.32	VOF084	29.78	VOF140	40.24	VOF196	50.70	VOF252	61.16
VOF029	19.51	VOF085	29.97	VOF141	40.43	VOF197	50.89	VOF253	61.35
VOF030	19.69	VOF086	30.15	VOF142	40.62	VOF198	51.08	VOF254	61.54
VOF031	19.88	VOF087	30.34	VOF143	40.80	VOF199	51.26	VOF255	61.72
VOF032	20.07	VOF088	30.53	VOF144	40.99	VOF200	51.45		
VOF033	20.25	VOF089	30.71	VOF145	41.18	VOF201	51.64		
VOF034	20.44	VOF090	30.90	VOF146	41.36	VOF202	51.82		
VOF035	20.63	VOF091	31.09	VOF147	41.55	VOF203	52.01		
VOF036	20.81	VOF092	31.28	VOF148	41.74	VOF204	52.20		
VOF037	21.00	VOF093	31.46	VOF149	41.92	VOF205	52.38		
VOF038	21.19	VOF094	31.65	VOF150	42.11	VOF206	52.57		
VOF039	21.37	VOF095	31.84	VOF151	42.30	VOF207	52.76		
VOF040	21.56	VOF096	32.02	VOF152	42.48	VOF208	52.94		
VOF041	21.75	VOF097	32.21	VOF153	42.67	VOF209	53.13		
VOF042	21.94	VOF098	32.40	VOF154	42.86	VOF210	53.32		
VOF043	22.12	VOF099	32.58	VOF155	43.04	VOF211	53.50		
VOF044	22.31	VOF100	32.77	VOF156	43.23	VOF212	53.69		
VOF045	22.50	VOF101	32.96	VOF157	43.42	VOF213	53.88		
VOF046	22.68	VOF102	33.14	VOF158	43.60	VOF214	54.06		
VOF047	22.87	VOF103	33.33	VOF159	43.79	VOF215	54.25		
VOF048	23.06	VOF104	33.52	VOF160	43.98	VOF216	54.44		
VOF049	23.24	VOF105	33.70	VOF161	44.16	VOF217	54.63		
VOF050	23.43	VOF106	33.89	VOF162	44.35	VOF218	54.81		
VOF051	23.62	VOF107	34.08	VOF163	44.54	VOF219	55.00		
VOF052	23.80	VOF108	34.26	VOF164	44.72	VOF220	55.19		
VOF053	23.99	VOF109	34.45	VOF165	44.91	VOF221	55.37		
VOF054	24.18	VOF110	34.64	VOF166	45.10	VOF222	55.56		
VOF055	24.36	VOF111	34.82	VOF167	45.29	VOF223	55.75		

## ■ Conversion charts for electronic VRs: Conversion chart for the Vyprst (1/2)

Conversion chart for the Vyprst (Commands vs. Voltage values for the 43-inch model)

Command	Voltage [V] 43-inch Model	Command	Voltage [V] 43-inch Model	Command	Voltage [V] 43-inch Model
VRP000	236.3	VRP056	260.6	VRP112	284.9
VRP001	236.7	VRP057	261.0	VRP113	285.4
VRP002	237.1	VRP058	261.5	VRP114	285.8
VRP003	237.6	VRP059	261.9	VRP115	286.2
VRP004	238.0	VRP060	262.3	VRP116	286.7
VRP005	238.4	VRP061	262.8	VRP117	287.1
VRP006	238.9	VRP062	263.2	VRP118	287.5
VRP007	239.3	VRP063	263.6	VRP119	288.0
VRP008	239.7	VRP064	264.1	VRP120	288.4
VRP009	240.2	VRP065	264.5	VRP121	288.8
VRP010	240.6	VRP066	264.9	VRP122	289.3
VRP011	241.0	VRP067	265.4	VRP123	289.7
VRP012	241.5	VRP068	265.8	VRP124	290.1
VRP013	241.9	VRP069	266.2	VRP125	290.6
VRP014	242.4	VRP070	266.7	VRP126	291.0
VRP015	242.8	VRP071	267.1	VRP127	291.4
VRP016	243.2	VRP072	267.5	VRP128	291.9
VRP017	243.7	VRP073	268.0	VRP129	292.3
VRP018	244.1	VRP074	268.4	VRP130	292.7
VRP019	244.5	VRP075	268.9	VRP131	293.2
VRP020	245.0	VRP076	269.3	VRP132	293.6
VRP021	245.4	VRP077	269.7	VRP133	294.0
VRP022	245.8	VRP078	270.2	VRP134	294.5
VRP023	246.3	VRP079	270.6	VRP135	294.9
VRP024	246.7	VRP080	271.0	VRP136	295.3
VRP025	247.1	VRP081	271.5	VRP137	295.8
VRP026	247.6	VRP082	271.9	VRP138	296.2
VRP027	248.0	VRP083	272.3	VRP139	296.7
VRP028	248.4	VRP084	272.8	VRP140	297.1
VRP029	248.9	VRP085	273.2	VRP141	297.5
VRP030	249.3	VRP086	273.6	VRP142	298.0
VRP031	249.7	VRP087	274.1	VRP143	298.4
VRP032	250.2	VRP088	274.5	VRP144	298.8
VRP033	250.6	VRP089	274.9	VRP145	299.3
VRP034	251.0	VRP090	275.4	VRP146	299.7
VRP035	251.5	VRP091	275.8	VRP147	300.1
VRP036	251.9	VRP092	276.2	VRP148	300.6
VRP037	252.3	VRP093	276.7	VRP149	301.0
VRP038	252.8	VRP094	277.1	VRP150	301.4
VRP039	253.2	VRP095	277.5	VRP151	301.9
VRP040	253.6	VRP096	278.0	VRP152	302.3
VRP041	254.1	VRP097	278.4	VRP153	302.7
VRP042	254.5	VRP098	278.8	VRP154	303.2
VRP043	254.9	VRP099	279.3	VRP155	303.6
VRP044	255.4	VRP100	279.7	VRP156	304.0
VRP045	255.8	VRP101	280.1	VRP157	304.5
VRP046	256.3	VRP102	280.6	VRP158	304.9
VRP047	256.7	VRP103	281.0	VRP159	305.3
VRP048	257.1	VRP104	281.4	VRP160	305.8
VRP049	257.6	VRP105	281.9	VRP161	306.2
VRP050	258.0	VRP106	282.3	VRP162	306.6
VRP051	258.4	VRP107	282.8	VRP163	307.1
VRP052	258.9	VRP108	283.2	VRP164	307.5
VRP053	259.3	VRP109	283.6	VRP165	307.9
VRP054	259.7	VRP110	284.1	VRP166	308.4
VRP055	260.2	VRP111	284.5	VRP167	308.8

## ■ Conversion charts for electronic VRs: Conversion chart for the Vyprst (2/2)

Conversion chart for the Vyprst (Commands vs. Voltage values for the 43-inch model)			
Command	Voltage [V]	Command	Voltage [V]
	43-inch Model		43-inch Model
VRP168	309.2	VRP224	333.6
VRP169	309.7	VRP225	334.0
VRP170	310.1	VRP226	334.4
VRP171	310.6	VRP227	334.9
VRP172	311.0	VRP228	335.3
VRP173	311.4	VRP229	335.7
VRP174	311.9	VRP230	336.2
VRP175	312.3	VRP231	336.6
VRP176	312.7	VRP232	337.1
VRP177	313.2	VRP233	337.5
VRP178	313.6	VRP234	337.9
VRP179	314.0	VRP235	338.4
VRP180	314.5	VRP236	338.8
VRP181	314.9	VRP237	339.2
VRP182	315.3	VRP238	339.7
VRP183	315.8	VRP239	340.1
VRP184	316.2	VRP240	340.5
VRP185	316.6	VRP241	341.0
VRP186	317.1	VRP242	341.4
VRP187	317.5	VRP243	341.8
VRP188	317.9	VRP244	342.3
VRP189	318.4	VRP245	342.7
VRP190	318.8	VRP246	343.1
VRP191	319.2	VRP247	343.6
VRP192	319.7	VRP248	344.0
VRP193	320.1	VRP249	344.4
VRP194	320.5	VRP250	344.9
VRP195	321.0	VRP251	345.3
VRP196	321.4	VRP252	345.7
VRP197	321.8	VRP253	346.2
VRP198	322.3	VRP254	346.6
VRP199	322.7	VRP255	347.0
VRP200	323.2		
VRP201	323.6		
VRP202	324.0		
VRP203	324.5		
VRP204	324.9		
VRP205	325.3		
VRP206	325.8		
VRP207	326.2		
VRP208	326.6		
VRP209	327.1		
VRP210	327.5		
VRP211	327.9		
VRP212	328.4		
VRP213	328.8		
VRP214	329.2		
VRP215	329.7		
VRP216	330.1		
VRP217	330.5		
VRP218	331.0		
VRP219	331.4		
VRP220	331.8		
VRP221	332.3		
VRP222	332.7		
VRP223	333.1		

# 7. GENERAL INFORMATION

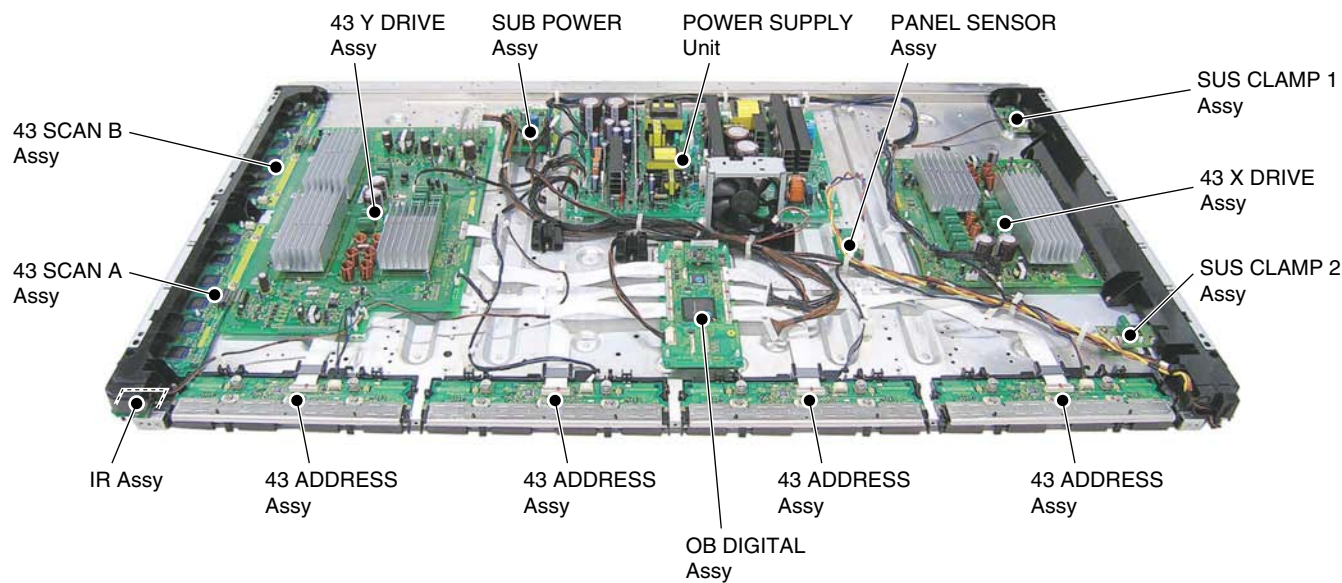
## 7.1 DIAGNOSIS

### 7.1.1 PCB LOCATION

A

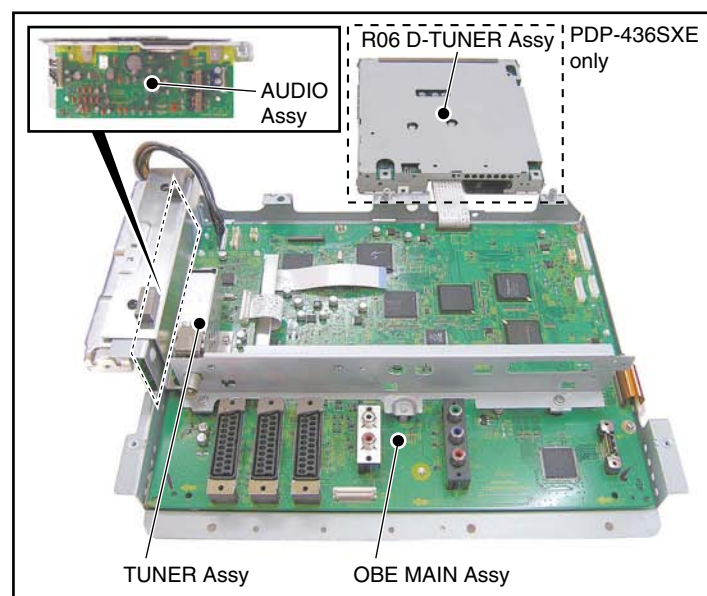
B

C

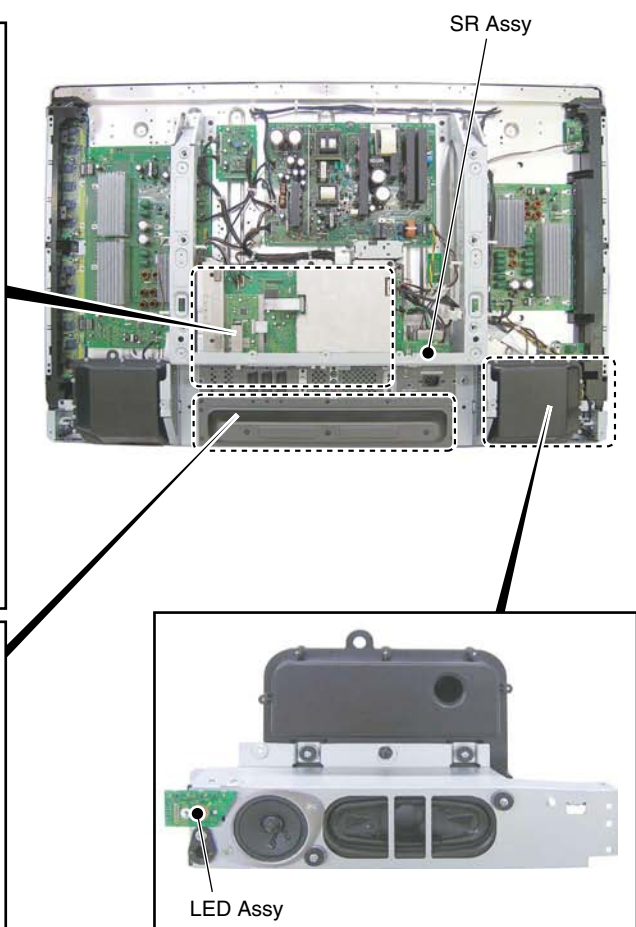
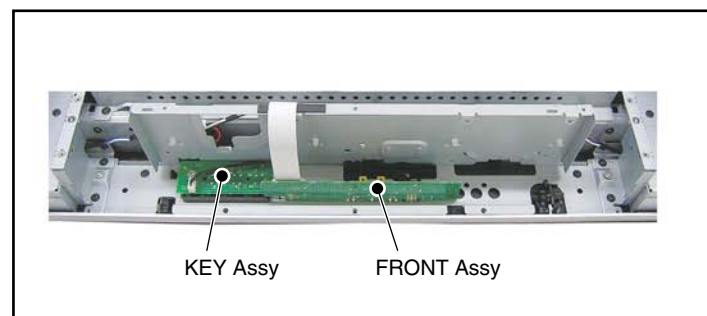


D

E



F

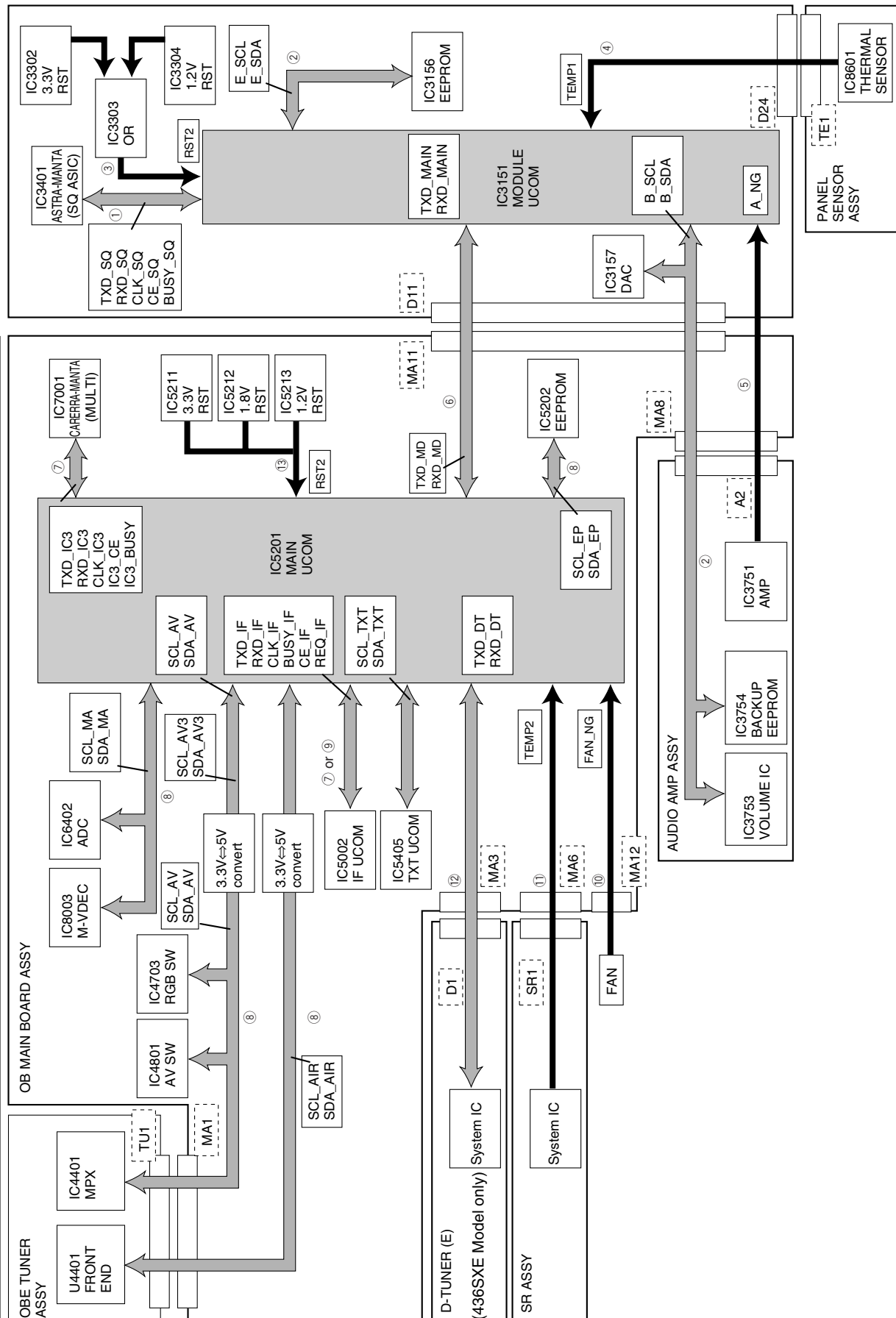


LED Pattern

State			LED Pattern
Standby (Power management)		B R	
Power ON		B R	
Power Down	Red n times (500+2500ms)	B R	
Shutdown	Blue n times (500+2500ms)	B R	
Backup copy NG	Red ligts + Blue Flashes (200ms)	B R	
Ucom rewriting	Red Blue Flashes (100ms)	B R	

## Block Diagram of Shutdown

\* The figures ① – ⑬ indicates the number of times the LED flashes when shutdown occurs in the corresponding route.

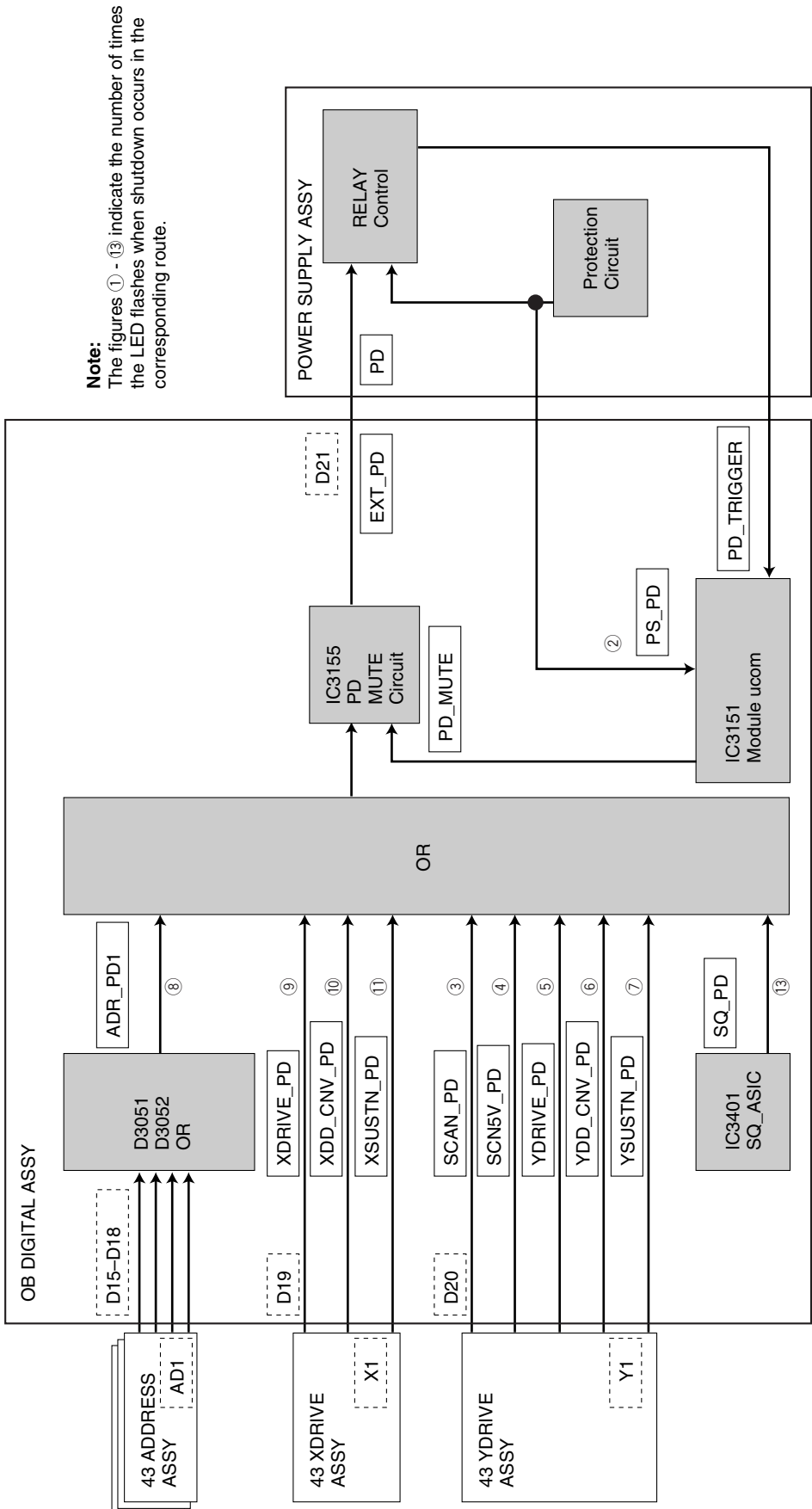




## ■ Shutdown diagnosis

LED's Flashing	Shutdown Operation	Defective Assy	Cause for Shutdown	Points to check	Possible defective parts	Remarks
Blue 1	Failure in communication with the Panel-Drive IC	OB DIGITAL OB DIGITAL	Failure in the Panel-Drive IC or its peripheral circuit Failure in writing in the Panel-Drive IC	SO ASIC BLOCK, PANEL_FLASH BLOCK	IC3401, IC3301 IC3401, IC3301	Turn the power back on then check if the version can be read with the QS1 command.
Blue 2	Failure in communication with the module IIC (Check the SD subcategory on the Factory menu.)	OB DIGITAL OB DIGITAL AUDIO AUDIO	Failure in the EEPROM (4K) or its peripheral circuit Failure in the DAC IC or its peripheral circuit Failure in the EEPROM(2K) or its peripheral circuit Failure in the Volume IC or its peripheral circuit Failure in an FPC or the periphery of the connector Failure in a cable or the periphery of the connector	MODULE UCOM BLOCK MODULE UCOM BLOCK AUDIO AUDIO	IC3156 IC3157 IC3754 IC3753	Check if the FPC is damaged or improperly connected. Check if the cable is damaged or short-circuited. Check if 3.3 V and 1.2 V are activated (not short-circuited).
Blue 3	Failure in the DIGITAL ASIC power supply	OB DIGITAL OB DIGITAL POWER SUPPLY	Failure in the DC/DC converter Failure in the RST 12-V power not booted	DIGITAL_DD_CON BLOCK PANELFLASH BLOCK POWER SUPPLY	U3601 IC3302, IC3304	Check if the cable is damaged, short-circuited, or disconnected.
Blue 4	Panel high temperature	OB DIGITAL PANEL SENSOR	Failure in a cable or the periphery of the connector Failure in the thermistor or its peripheral circuit	D24-TET1 PANEL SENSOR	TH8601	Temperature detected by the sensor is 90°C or higher. Check if speaker cables are short-circuited inside the unit.
Blue 5	Failure in audio	AUDIO	Speaker short-circuited Failure in the AMP IC Failure in an FPC or the periphery of the connector Failure in a cable or the periphery of the connector	Speaker terminals AUDIO AMP Periphery of the FPC that connects between MA11 and D11 Periphery of the cable that connects between MA8 and A2	IC3751	Check if the FPC is damaged or improperly connected. Check if the cable is damaged or short-circuited.
Blue 6	Failure in communication with the module microcomputer	OB DIGITAL OB DIGITAL	Failure in the module UCOM or its peripheral circuit Failure in writing in the module UCOM Failure in an FPC or the periphery of the connector	MODULE UCOM BLOCK MODULE UCOM BLOCK	IC3151 IC5201	Check for short-circuited/open communication line (TXD_MAIN/RXD_MAIN).
Blue 7	Failure in three-wire-serial communication with the main microcomputer (Check the SD subcategory on the Factory menu.)	OBE MAIN OBE MAIN OBE MAIN	Failure in the IF UCOM or its peripheral circuit Failure in the MULTI IC or its peripheral circuit Failure in writing in the MULTI IC	IFUCOM BLOCK MULTI BLOCK	IC5002 IC7001, IC7002 IC7001, IC7002	Check if the FPC is damaged or improperly connected. Check for short-circuited/open communication line (TXD_IFRXD_IFCLK_IFBUSY_IFCE_IFREQ_IP) Check for short-circuited/open communication line (TXD_IC3/RXD_IC3/CLK_IC3/BUSY_IC3/CE_IC3)
Blue 8	Failure in IIC communication with the main microcomputer	TUNER OBE MAIN OBE MAIN OBE MAIN TUNER OBE MAIN OBE MAIN OBE MAIN OBE MAIN OBE MAIN	Failure in the front end or its peripheral circuit Failure in the periphery of the connector Failure in the AV_SW or its peripheral circuit Failure in the RGB_SW or its peripheral circuit Failure in the MPX or its peripheral circuit Failure in the 3.3 V-5 V conversion circuit Failure in the TX UCOM or its peripheral circuit Failure in the M-DECO or its peripheral circuit Failure in the ADC or its peripheral circuit Failure in the MA-EEP or its peripheral circuit Failure in the main UCOM or its peripheral circuit Failure in writing in the main UCOM Failure in the fan motor or stoppage of the fan caused by adherence of dirt Failure in a cable or the periphery of the connector	TUNER Periphery of the TU1 and MA1 connectors AV_SW BLOCK RGB_SW BLOCK MPX MAIN_UCOM BLOCK TXT_UCOM BLOCK VDEC BLOCK ADC BLOCK MAIN_UCOM BLOCK MAIN_UCOM BLOCK MAIN_UCOM BLOCK FAN MA12	U4401 IC4801 IC4703 IC4401 Q5201 IC5405 IC6003 IC6201 IC5202 IC5206, IC5207 IC5206, IC5207	Check for short-circuited/open communication line (SCL_AIR/SDA_AIR) Check if the cable is improperly connected. Check for short-circuited/open communication line (SCL_AV3/SDA_AV3/SCL_AV/SDA_AV) Check for short-circuited/open communication line (SCL_AV3/SDA_AV3/SCL_AV/SDA_AV) Check for short-circuited/open communication line (SCL_AV3/SDA_AV3/SDA_AV/SDA_AV) Check for short-circuited/open communication line (SCL_MA/SDA_MA) Check for short-circuited/open communication line (SCL_MA/SDA_MA) Check for short-circuited/open communication line (SCL_EP/SDA_EP) Check for short-circuited/open communication line (TXD_IFRXD_IFCLK_IFBUSY_IFCE_IFREQ_IP)
Blue 9	Failure in communication with the main microcomputer	OBE MAIN OBE MAIN FAN	Failure in writing in the main UCOM Failure in the fan motor or stoppage of the fan caused by adherence of dirt Failure in a cable or the periphery of the connector	MAIN_UCOM BLOCK MAIN_UCOM BLOCK FAN	IC5206, IC5207 IC5206, IC5207	Check if the cable is disconnected or improperly connected.
Blue 10	Failure in the fan					
Blue 11	Unit high temperature		Use in a high ambient temperature Failure in the thermistor or its peripheral circuit	Ambient temperature	TH7601	Temperature detected by the sensor is 65°C or higher.
Blue 12	Failure in the digital tuner Note: The unit will not be shut off. The log is recorded only.	DIGITAL TUNER	Failure in a cable or the periphery of the connector Failure in the system IC or its peripheral circuit Failure in a signal-system flexible cable or in the periphery of the connector Failure in a power-supply-system cable or in the periphery of the connector	MA6-SR1 MA3-D1 PS3-D5	IC2000	Check if the cable is damaged, short-circuited, or disconnected. Check for short-circuited/open communication line (TXD_DT/RXD_DT) Check if the flexible cable is damaged or improperly connected.
Blue 13	Failure in the MAIN ASIC power supply	OB DIGITAL OBE MAIN POWER SUPPLY	Failure in a cable or the periphery of the connector Failure in the DC/DC converter Failure in the RST IC 12-V power not booted	D12-MA10 DIGITAL_DD_CON BLOCK MAIN_UCOM BLOCK POWER SUPPLY	U3601 IC5211, IC5212, IC5213	Check if the cable is damaged, short-circuited, or disconnected. Check if 3.3 V and 1.2 V are activated (not short-circuited). Check if 3.3 V, 1.8 V and 1.2 V are activated (not short-circuited).

Power Down Signal Block Diagram





• DIAGNOSIS OF POWER DOWN (FAILURE POINT)

LED Flashing times	Operation PD	Failure PCB Assy	PD Summary	Confirming Point	Assumed Failure Parts	Remarks
2	POWER	POWER SUPPLY		SCAN IC	SCAN IC	VH-GNDH Short Cut
3	SCAN	43 SCAN A, B	VH UVP Detection of Connector loosing out	Y SUS BLOCK	IC2252, IC2253	VSUS-SUSOUT, SUSOUT-SUSGND Short Cut
		43 Y DRIVE		VH DC/DC	IC2502, L2501	
		43 X DRIVE		CN2001, CN2350		
4	SCN-5V	43 SCAN A, B	VH UVP Detection of Connector loosing out	IC1202	IC1202	VSUS-SUSOUT, SUSOUT-SUSGND Short Cut
		43 Y DRIVE		CN2401, CN2402		
				SCAN IC	SCAN IC	
6	Y-DCDC	43 Y DRIVE	VOFS UVP Vprst UVP	IC5V DC/DC	Q2605, R2647	
				Y SUS BLOCK	R2352	
				VOFS DC/DC	Q2606, R2619, R2620	
7	Y-SUS	43 Y DRIVE	Detecting PD of mid-point voltage	Y SUS BLOCK	IC2252, IC2253, Q2280, Q2281	MSKS-SUSOUT Short Cut
				Vprst Regulator	Q2531, Q2532, IC2535	
				Y RESONANCE BLOCK	IC2101	
8	ADRS	43 ADDRESS	Address PD Detection of Connector loosing out	Y SUS BLOCK	Q2221	
				ADDRESS RESONANCE BLOCK	D1634	V+ADR-GND_ADR Short Cut
				CN1501, CN3501-CN3504		
9	XDRIVE	43 X DRIVE	Detection of Connector loosing out	CN1001		
				CN1201		
				VRN DC/DC	Q1323, R1332, R1333	
10	X-DCDC	43 X DRIVE	VRN UVP Detecting PD of mid-point voltage	X SUS BLOCK	R1204, Q1272	
				X RESONANCE BLOCK	IC1101	
				SQ ASIC BLOCK	IC3401	
11	X-SUS	43 X DRIVE	Detecting PD of mid-point voltage			
13	SQ	OB DIGITAL	Drive sequence stop			

OVP : OVER VOLTAGE PROTECT  
UVP : UNDER VOLTAGE PROTECT

## 7.1.4 POWER ON/OFF FUNCTION FOR THE LARGE-SIGNAL SYSTEM

**Function:** To prevent a power-down from being generated, operation of only the digital-signal processing and audio circuits are enabled, and power is not supplied to the panel driving system (large-signal system).

**Usages:**

1. In a case where a check is required of signals' being correctly output to the driving systems during a repair, etc.
2. In a case where diagnosis is required for judging whether the power to the large-signal system or small-signal system has been down when a power-down occurred.
3. In a case where micro-computer is required to rewrite.

**Methods:**

1. Short-circuit the test point K7601 (DRF) of the SR Assy and GND (see Fig. 4 below).
2. Issue the "DRV S00" RS-232C command. (Command for turning the function off: DRV S01)

**Notes:**

- When the power to the large-signal system is off, as the PD signal is muted, power-downs other than PS\_PD are not activated.
- As soon as the clips are removed while the power to the large-signal system is off, a power-down will occur. Be sure to turn the power off before removing the clips.
- While this function is activated with RS-232C commands, it is possible to issue "DRV S01" (for turning the function off) while the power is on. However, as it may damage the unit, turn the power off before issuing the "DRV S01" command.
- Although the "DRV S00/S01" RS-232C commands are valid during Standby mode, once the main power is turned off, the unit will return to "DRV S01."

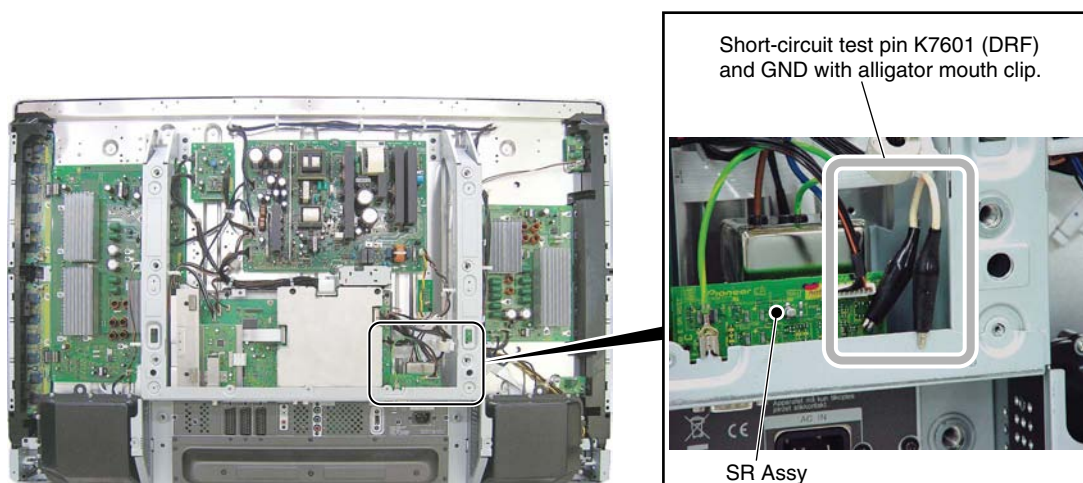


Fig. 4 Position of DRIVE OFF

### Outline

Adjustment data set at the factory are stored in the EEPROM (IC3156/4K) on the OB DIGITAL Assy. Those adjustment data are automatically backed up in the EEPROM (backup EEPROM: IC3754) on the AUDIO Assy. Therefore, even if the OB DIGITAL Assy is replaced, the adjustment data can be restored by copying the backup data, which enables you to omit newly performing adjustments on the panel unit.

### Data to be backed up

- Voltage margin adjustment values
- Data on the hour meter
- Upper limit of power-adjustment value
- Data on the pulse meter
- Panel WB adjustment values
- Serial number
- Drive waveform adjustment values
- Data of the P-ON counter
- PD/SD histories

### How to copy the backup data

- When the OB DIGITAL Assy is replaced with that for service (normal servicing)  
(In a case where no data are on the DIG. EEP, and backup data have been adjusted)

Command: "BCP" (Effective during FAY)  
Factory Menu

PANEL INFORMATION

▼ (down)

...

▼ (down)

ETC. (+)

[set]

BACKUP DATA: NO OPRT

>> (right)

BACKUP DATA: TRANSFER

[set] (Press and hold for 5 seconds.)

- After the OB DIGITAL Assy is replaced with that for service, check that "DIG. EEP: NO DATA!" is displayed on the Panel Information screen of the Factory Menu.
- If this command is not executed, the red LED lights, and the blue LED flashes, to warn you that copying of the backup adjustment data for the panel unit failed.
- If both the OB DIGITAL Assy and AUDIO Assy are to be replaced, first replace the AUDIO Assy and set the unit to Standby mode. Then replace the OB DIGITAL Assy.

- In a case where a OB DIGITAL Assy that was mounted on another unit is to be reused as a service part.

Command: "FAJ" (Effective during FAY)  
Factory Menu: PANEL FACT => ETC => DIGITAL EEPROM: DELETE

PANEL INFORMATION

▼ (down)

...

▼ (down)

ETC. (+)

[set]

BACKUP DATA: NO OPRT

▼ (down)

DIGITAL EEPROM: NO OPRT

>> (right)

DIGITAL EEPROM: REPAIR

[set] (Press and hold for 5 seconds.)

- If the OB DIGITAL Assy of Unit 1 is mounted to be reused in Unit 2 to be repaired, and Unit 2 enters Standby mode, the adjustment data and histories stored in Unit 1 are erased, and those of Unit 2 are copied. Once overwritten, the original data will not be restored. After the Assy is replaced, be sure to enter Factory mode, using the remote control unit for servicing, and perform the procedures described herein. Or, before mounting an Assy to be reused as a service Assy, perform these procedures then mount it on the product to be repaired.

3. In a case where the OB DIGITAL Assy is replaced with one for servicing because of a defective EEPROM on the original Assy and manual adjustments are to be performed

(In a case where no data are stored in the OB DIGITAL Assy or as backup, and the values that have been manually adjusted on Service Menu are to be applied as adjustment data for the panel unit)

Command: "UAJ" (Effective during FAY)

Factory Menu

PANEL INFORMATION

▼ (down)

...

▼ (down)

ETC. (+)

[set]

BACKUP DATA: NO OPRT

▼ (down)

DIGITAL EEPROM: NO OPRT

>> (right)

DIGITAL EEPROM: REPAIR

[set] (Press and hold for 5 seconds.)

- If the OB DIGITAL Assy with which adjustment data for the panel unit have been copied is mounted, the above procedures are not necessary after manual adjustment.  
(The indication "DIGITAL EEPROM: REPAIR" will not be displayed.)

### Clearing data on various histories when the OB DIGITAL Assy is replaced

Other than adjustment data for the panel unit, data to be backed up include the accumulated power-on time and a history of defective parts, which are data updated and stored in memory. Among those data, some are required to be cleared when the OB DIGITAL Assy is replaced for servicing, as shown below:

Item	Backed-up data	Type of servicing			RS-232C command
		Panel replacement	Replacement of the power-supply block	Others	
Hour meter	Accumulated display	To be cleared	Not to be cleared	Not to be cleared	CHM
SD history	Point where an SD occurred and data on the hour meter	To be cleared	Not to be cleared	Not to be cleared	CSD
PD history	Point where a PD occurred and data on the hour meter	To be cleared	Not to be cleared	Not to be cleared	CPD
Pulse meter	Accumulated number of pulses of the Panel (5 blocks)	To be cleared (essential)	Not to be cleared	Not to be cleared	CPM
Accumulated number of power-ons	Accumulated number of RELAY_ONs	Not to be cleared	To be cleared (essential)	Not to be cleared	CPC

#### Notes:

- 1: With the PDP-436SXE/RXE and subsequent models, because various compensation functions use pulse-meter data for calculating compensation values, if related Assys are replaced, data on various histories must be cleared.
- 2: To clear data using RS-232C commands, after entering Factory mode (by sending FAY or PFY), issue a corresponding command. Otherwise, the command will not be executed.

## How to clear the history for each item on the Factory Menu

A

Start point of Panel Factory

PANEL INFORMATION

▼ (down)

...

▼ (down)

ETC. (+)

[set]

BACKUP DATA

▼ (down)

DIGITAL EEPROM

▼ (down)

Clearing the PD history

PD INFO: NO OPRT

>> (right)

PD INFO: CLEAR

[set] (Press and hold for 5 seconds.)

Clearing the SD history

SD INFO: NO OPRT

>> (right)

SD INFO: CLEAR

[set] (Press and hold for 5 seconds.)

Clearing the data on the hour meter

HR-MTR INFO: NO OPRT

>> (right)

HR-MTR INFO: CLEAR

[set] (Press and hold for 5 seconds.)

D

▼ (down)

E

Clearing the data on the pulse meter

PM/B1-BS INFO: NO OPRT

>> (right)

PM/B1-BS INFO: CLEAR

[set] (Press and hold for 5 seconds.)

Clearing the data on the number of power-ons

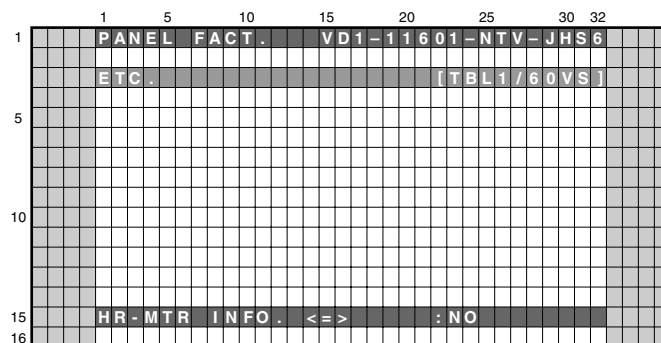
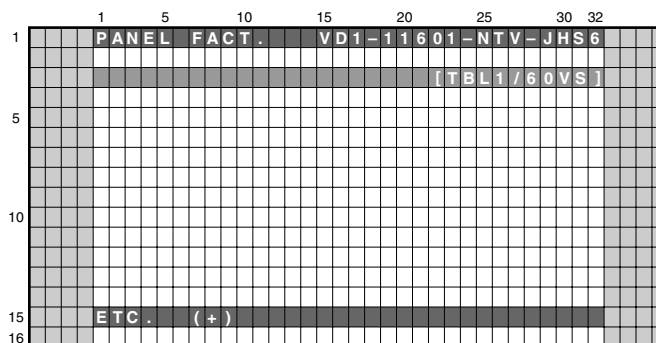
P COUNT INFO: NO OPRT

>> (right)

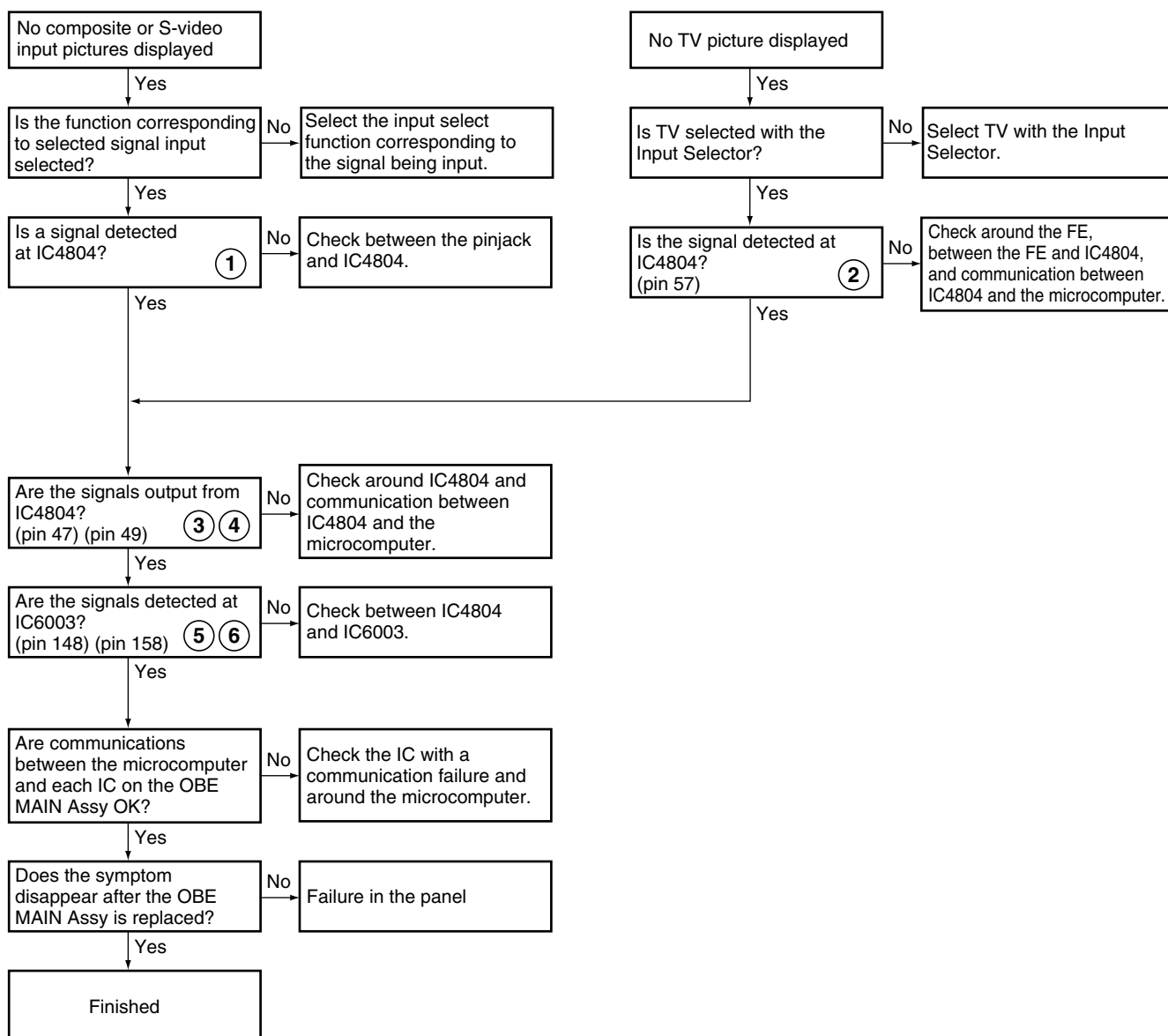
P COUNT INFO: CLEAR

[set] (Press and hold for 5 seconds.)

F



● No composite or S-video input pictures displayed



**Note:**

- Diagnosis points
- OBE MAIN ASSY**
- For check the communication with the microcomputer, refer to the section 6.3 SERVICE FACTORY MODE.
- The encircled numbers denote measuring point in the Waveforms for Troubleshooting.

# ● No picture from the SCART connector displayed

A

No picture from the SCART connector of INPUT 1 displayed

Yes

The signal to be output from the INPUT 1 SCART connector is an analog TV video signal.

No

The signal output from the SCART connector is always an analog TV video signal. Check the signal with an analog TV.

Yes

Is a signal detected at IC4804?

No

Check between the SCART connector and IC4804.

Yes

Is a signal output from IC4804? (pin 38) ⑦

No

Check around IC4804 and check the communication between IC4804 and the microcomputer.

Yes

Is a signal detected at TP4601? ⑧

No

Check between IC4804 and TP4601.

Yes

Check around the SCART connector.

B

No picture from the SCART connector of INPUT 3 displayed

Yes

The input signal is either for analog/digital TV, video, or S-video.

No

Those signals are not output from the SCART connector. Check with other types of video signals.

Yes

Is a signal detected at IC4804?

No

Check between the SCART connector and IC4804.

Yes

Is a signal output from IC4804? (pin 79) ⑨

No

Check around IC4804 and check the communication between IC4804 and the microcomputer.

Yes

Is a signal detected at TP4636? ⑪

No

Check between IC4804 and TP4636.

Yes

Check around the SCART terminal.

C

D

No picture from the SCART connector of INPUT 2 displayed

Yes

The input signal is either for analog/digital TV, video, or S-video.

No

Those signals are not output from the SCART connector. Check with other types of video signals.

Yes

Is a signal detected at IC4804?

No

Check between the SCART connector and IC4804.

Yes

Is a signal output from IC4804? (pin 79) ⑨

No

Check around IC4804 and check the communication between IC4804 and the microcomputer.

Yes

Is a signal detected at TP4620? ⑩

No

Check between IC4804 and TP4620.

Yes

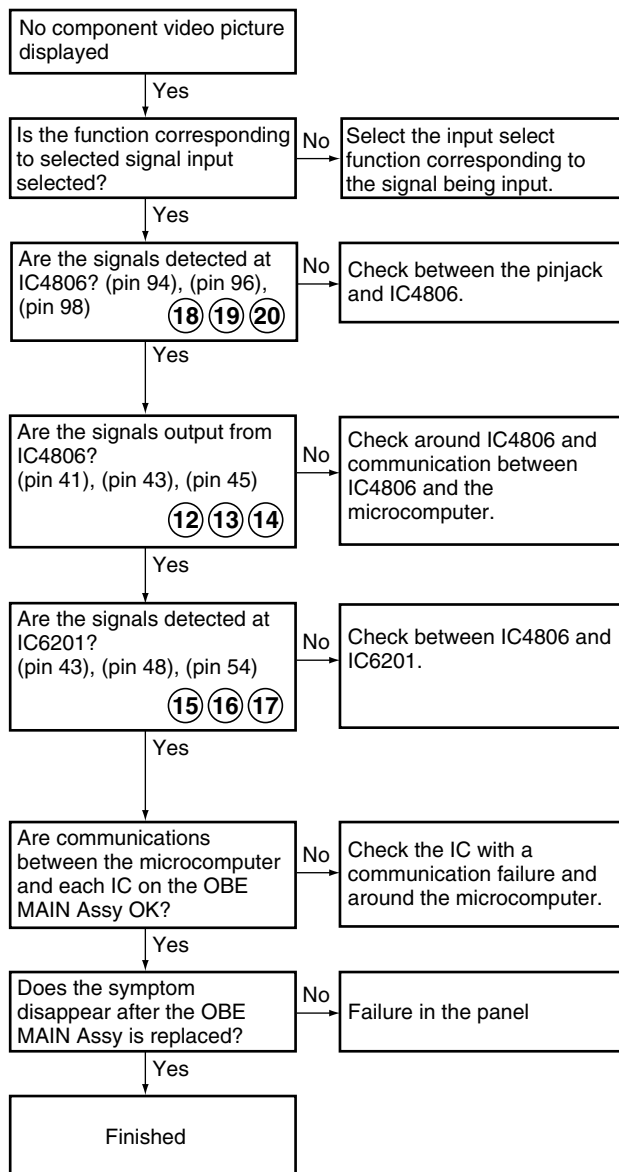
Check around the SCART terminal.

E

F



## ● No component video picture displayed



# ● No picture displayed when an RGB signal is input

A

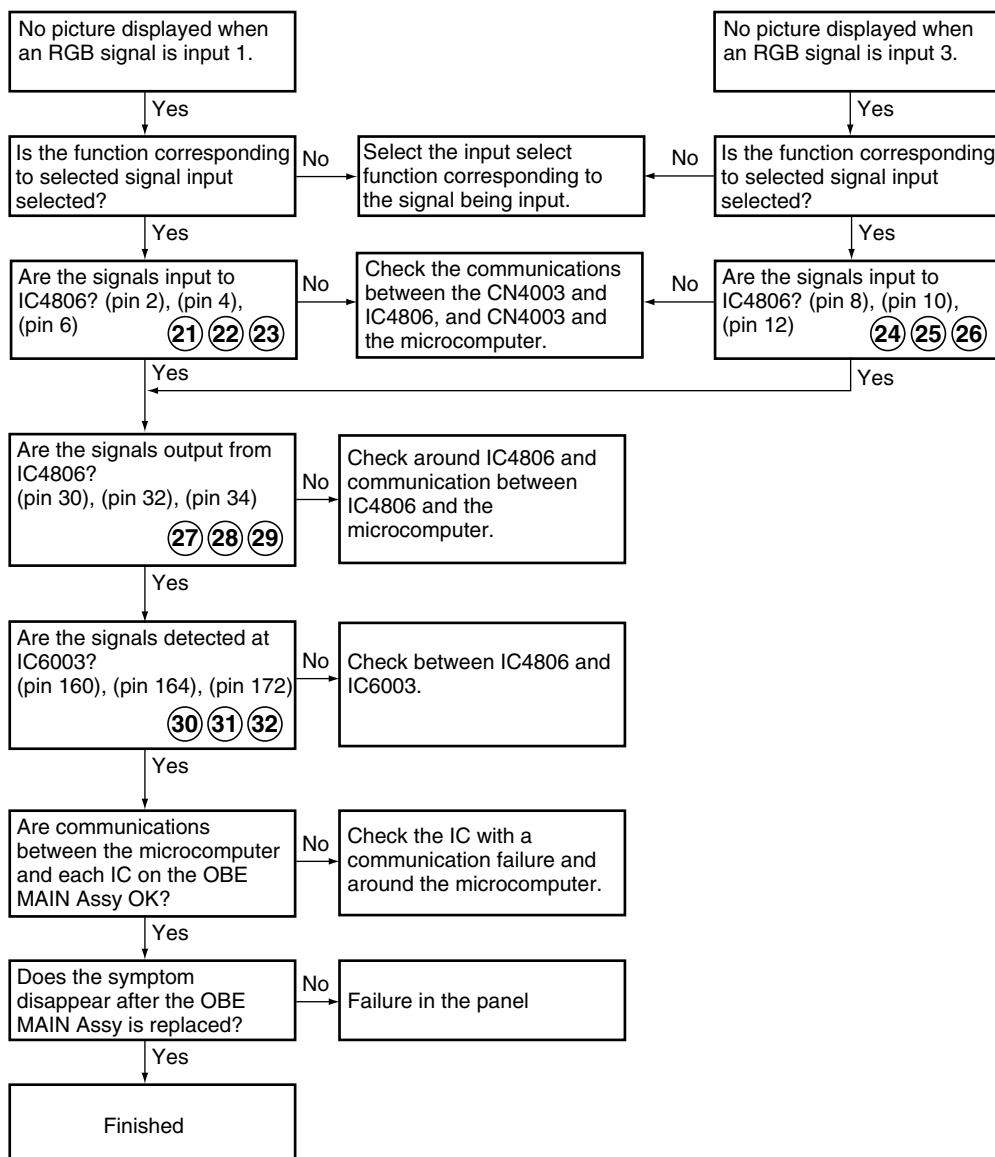
B

C

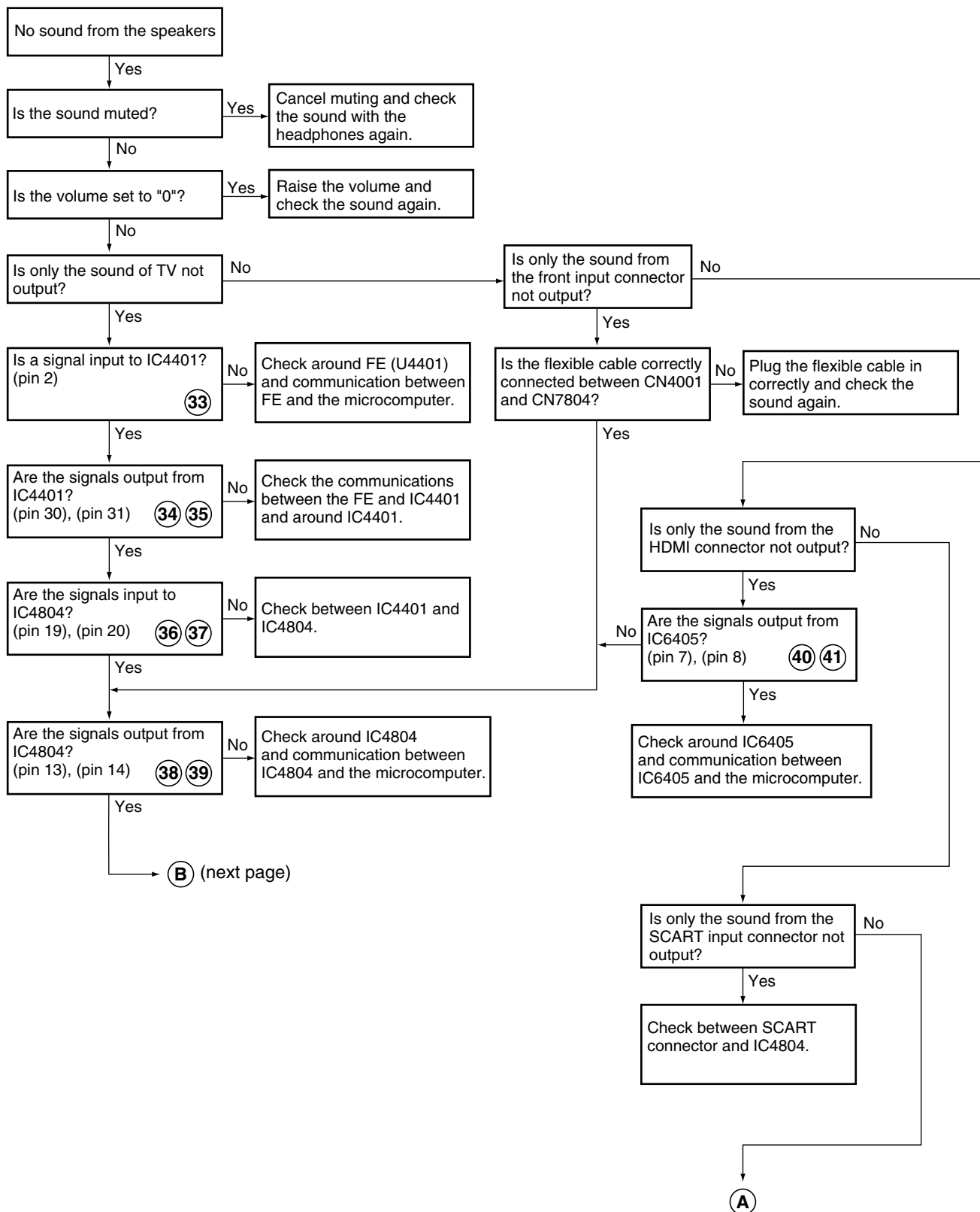
D

E

F

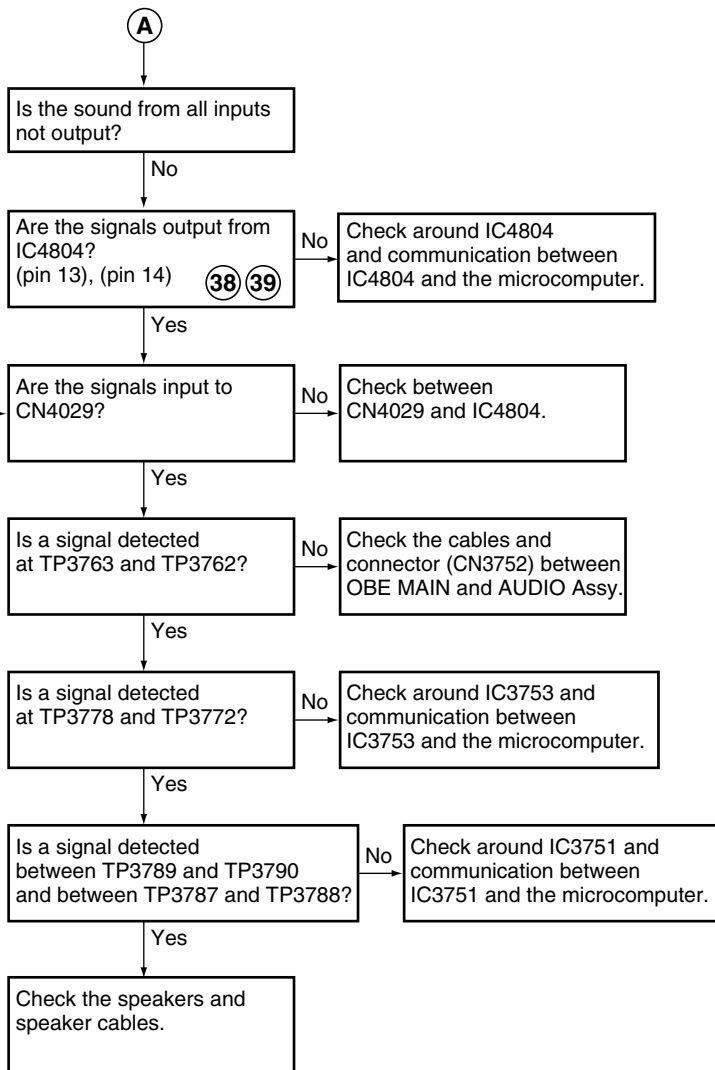


# ● No sound from the speakers (1/2)



# ● No sound from the speakers (2/2)

A



B

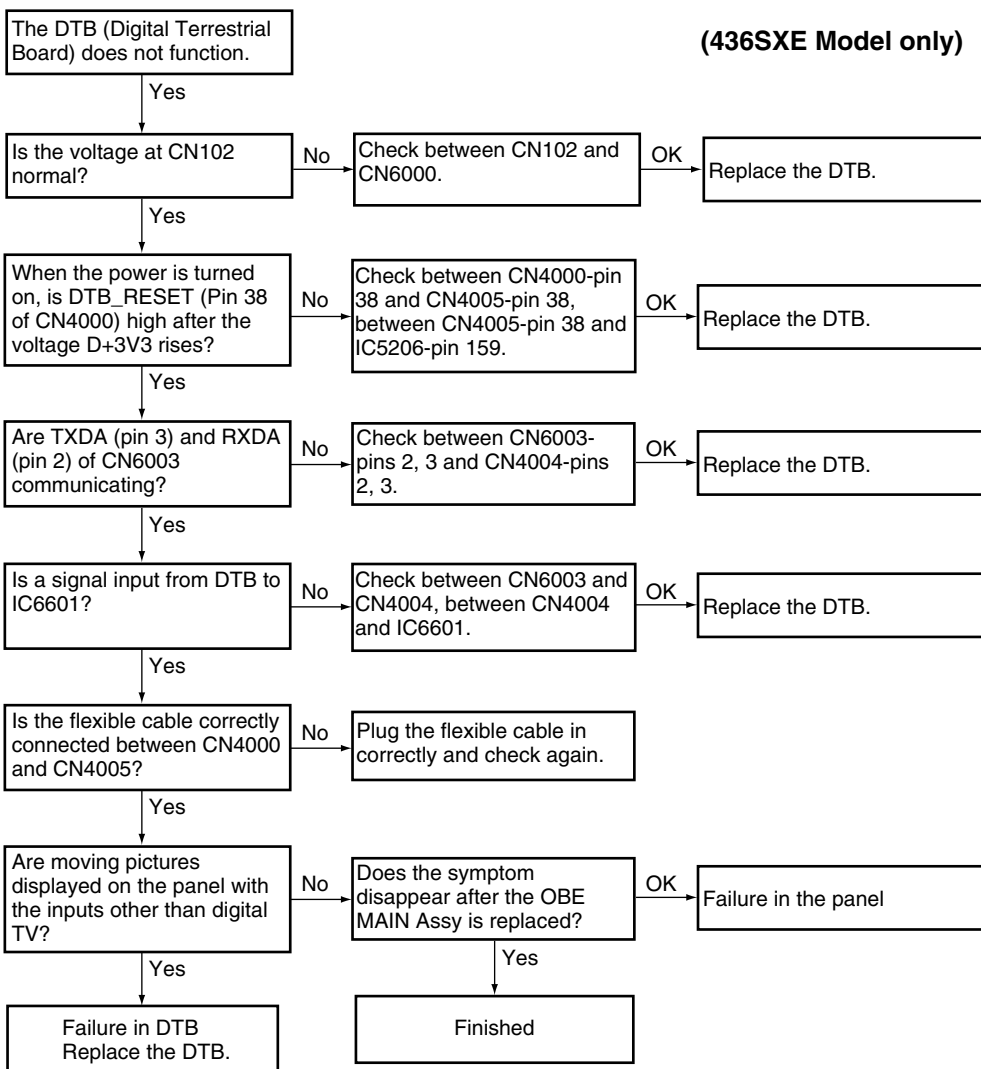
C

D

E

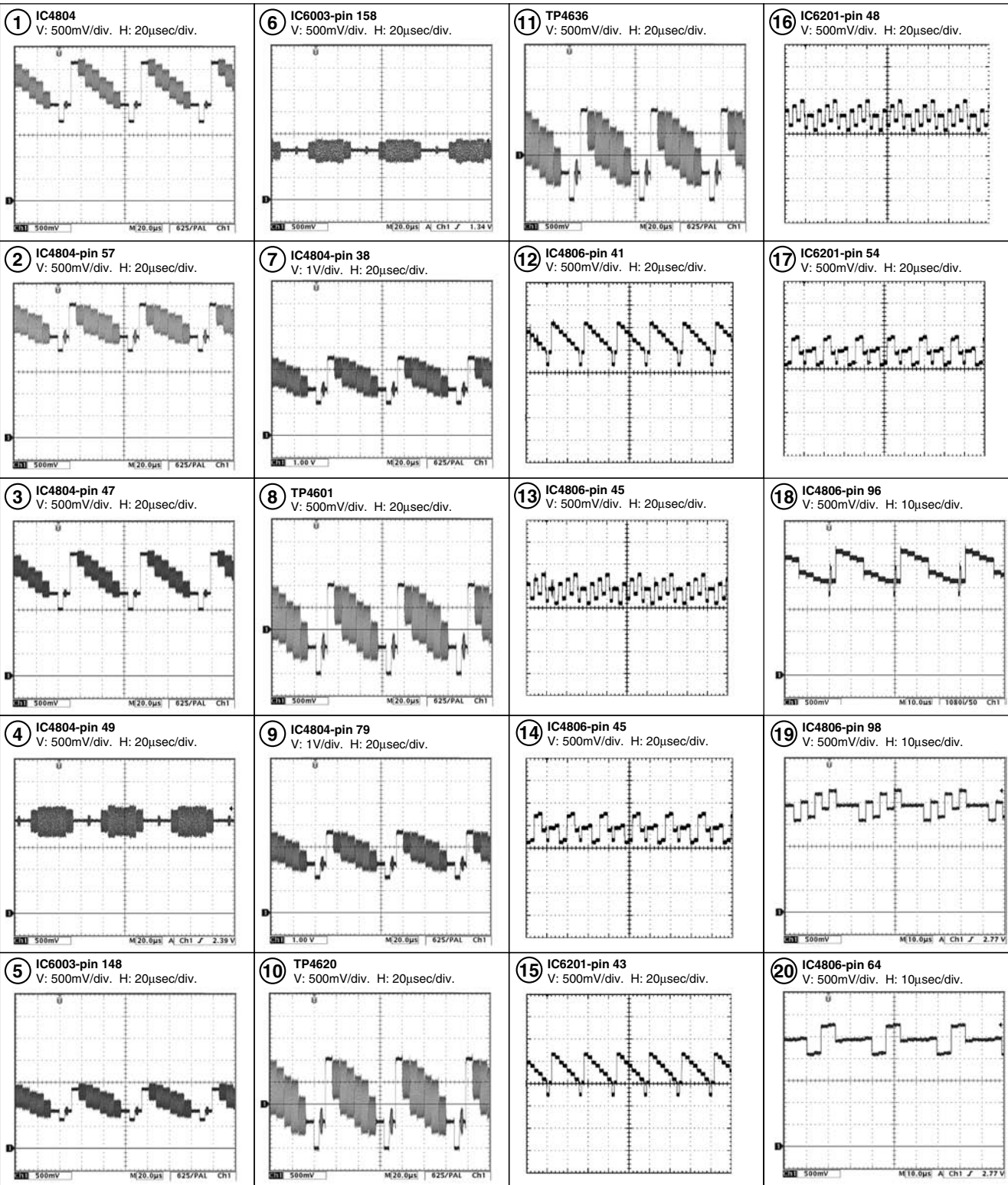
F

● The DTB (Digital Terrestrial Board) does not function

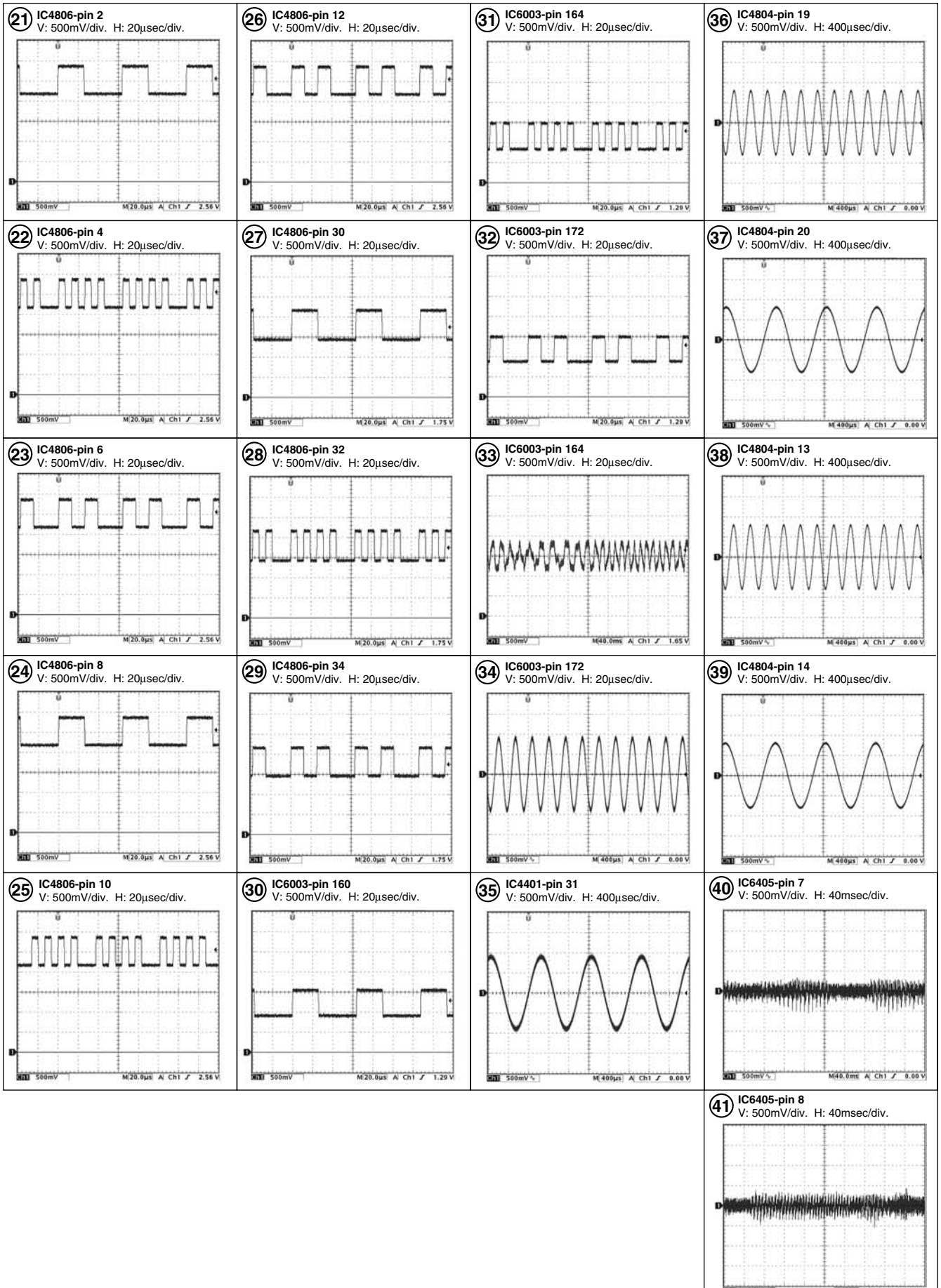


# ● Waveforms for Troubleshooting

## OBE MAIN ASSY







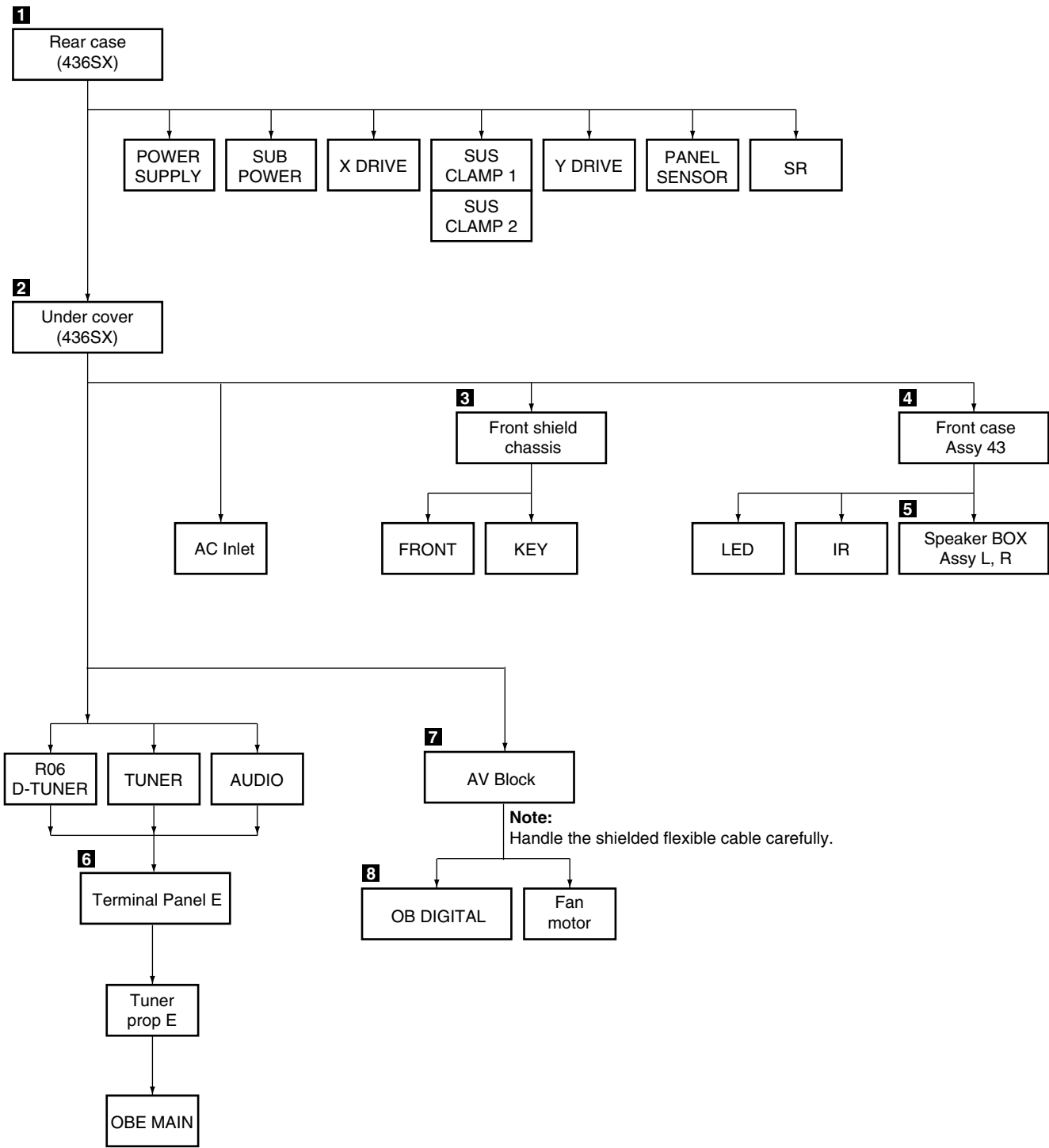
**Note 1:** Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

**Note 2:** The following flexible cables for servicing are necessary for diagnosis of boards:

- Flexible Extension cable for servicing (40P) (GGD1170)

Chart of removal order for the main parts and boards

It is efficient to proceed with removal of the main parts and boards in the order shown in the chart below:

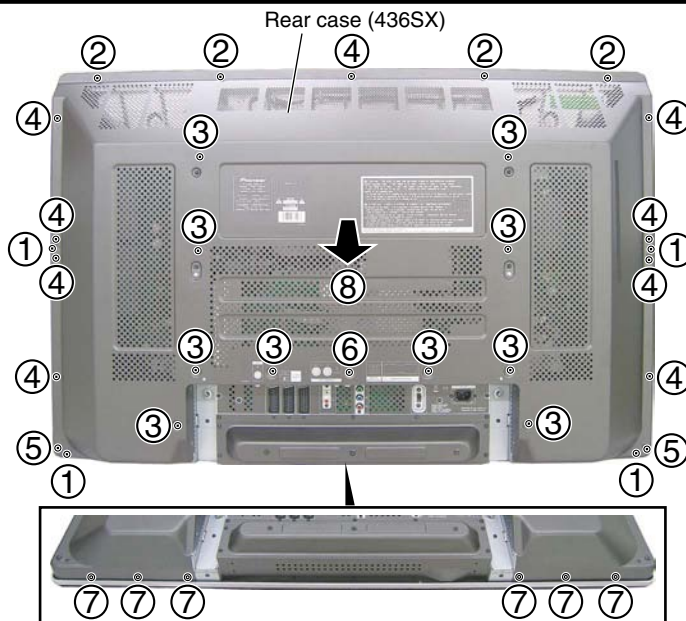




## Disassembly

### 1 Rear Case (436SX)

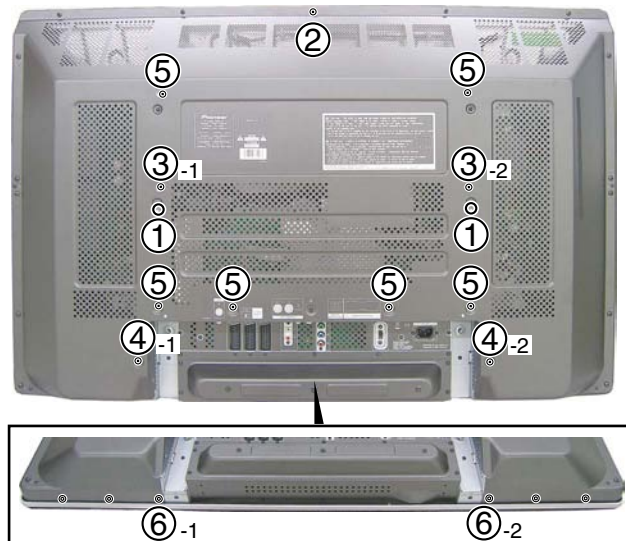
- ① Remove the four screws. (ABA1332)
- ② Remove the four screws. (BBZ40P180FTB)
- ③ Remove the ten screws. (AMZ30P060FTB)
- ④ Remove the nine screws. (TBZ40P080FTB)
- ⑤ Remove the two screws and two washers. (TBZ40P080FTB + WC40FTB)
- ⑥ Remove the one screw. (ABA1341)
- ⑦ Remove the six hexagon screws. (ABA1345)
- ⑧ Remove the rear case (436SX).



#### • About reattachment

Because of the complex shape of the Rear case, it is difficult to align the screw holes when reattaching the Rear case. For easy reattachment, be sure to install the screws for the Rear case in the order indicated in the photo. After securing those screws in place, the other screws and washers can be reattached in any order.

- ① Engage the two Positioning Pins.
- ② One screw (TBZ40P080FTB)
- ③ Two screws (AMZ30P060FTB)
- ④ Two screws (AMZ30P060FTB)
- ⑤ Six screws (AMZ30P060FTB)
- ⑥ Two hexagon screws (ABA1345)



### 2 Under Cover (436SX)

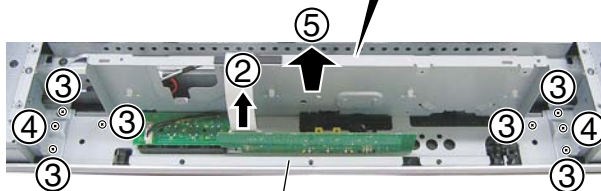
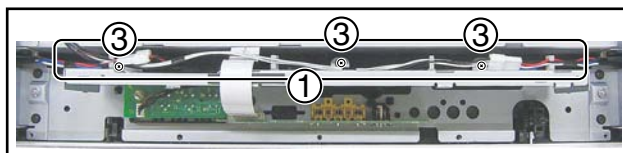
- ① Remove the two screws. (ABZ30P080FTB)
- ② Remove the three screws. (APZ30P100FTB)
- ③ Remove the three screws. (ABA1340)
- ④ Remove the eight screws. (AMZ30P060FTB)
- ⑤ Remove the three screws. (BPZ30P080FTB)
- ⑥ Remove the under cover (436SX).



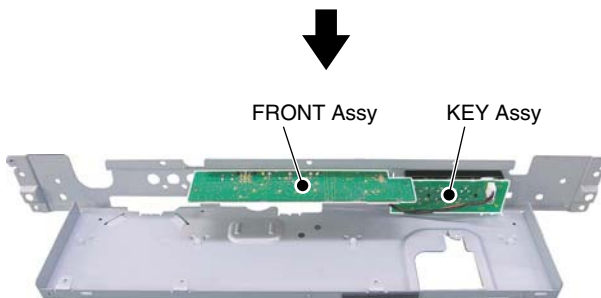
A

### 3 Front Shield Chassis

- ① Detach the speaker cables from their cable ties.
- ② Disconnect the one flexible cable.
- ③ Remove the nine screws.
- ④ Remove the two screws.
- ⑤ Remove the front shield chassis with the PCB boards.



Front shield chassis



B

C

D

### 4 Front Case Assy 43

- ① Pull the lower part of the Front case Assy 43 toward you and out.
- ② Remove the Front case Assy 43, by pulling it upward.



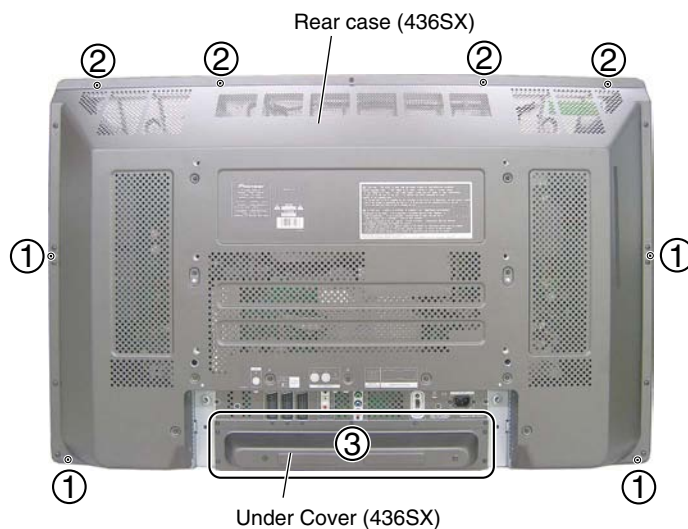
E

F

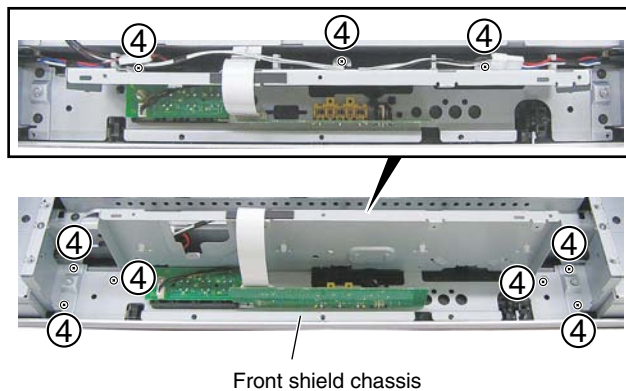
### ● Removal of only the Front case Assy 43

If only the Front case Assy 43 must be removed, follow the procedure below:

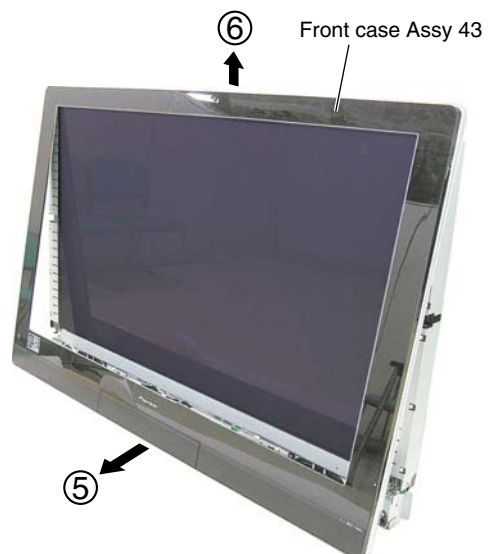
- ① Remove the four screws. (ABA1332)
- ② Remove the four screws. (BBZ40P180FTB)
- ③ Remove the under cover (436SX).  
(See Procedure 2.)



- ④ Remove the nine screws. (APZ30P100FTB)



- ⑤ Pull the lower part of the Front case Assy 43 toward you and out.
- ⑥ Remove the Front case Assy 43, by pulling it upward.



A

### ● About reattachment of the Front case Assy 43

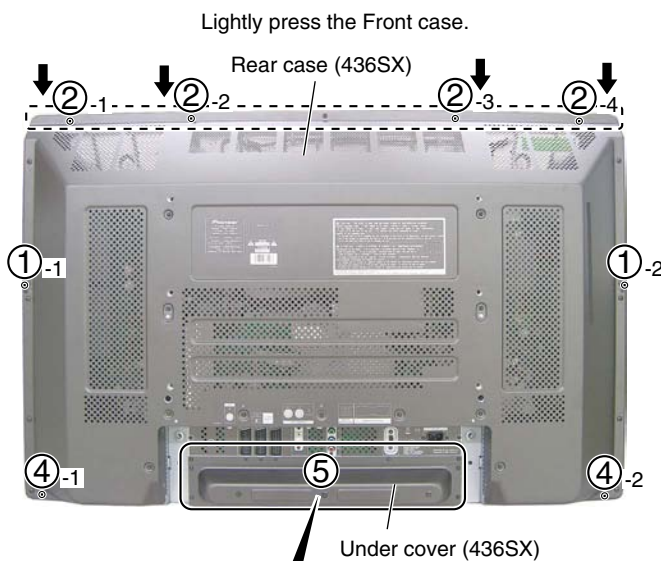
When reattaching the Front case Assy with the Rear case attached, be sure to install the screws in the order described below:

- ① Two screws (ABA1332)
- ② Four screws (BBZ40P180FTB)
- ③ Nine screws (APZ30P100FTB)
- ④ Two screws (ABA1332)
- ⑤ Under cover (436SX)  
(See Procedure 2.)

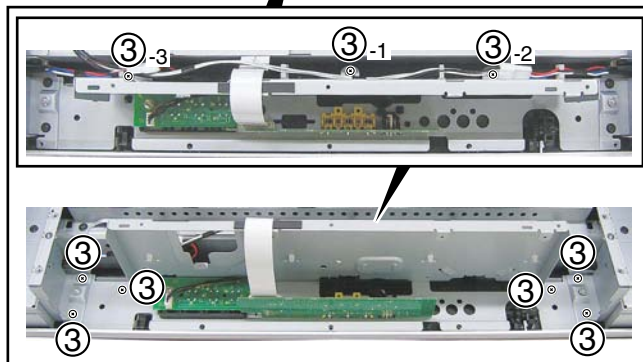
B

#### Note:

While the screws in Steps ① and ② are being installed, the Front case tends to shift upward. In order to not allow any undesired gap between the Rear case and the Front case, while tightening the screws, lightly press and hold the four locations near the screws indicated with arrows in the photo at right.



C



D

E

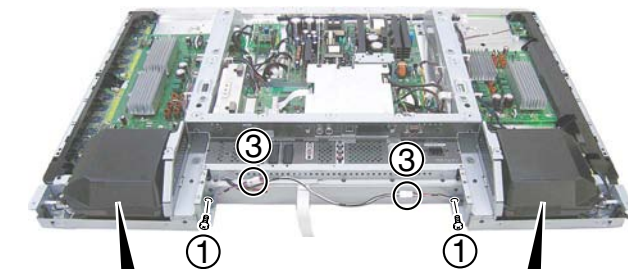
F



## 5 Speaker BOX Assy L and R

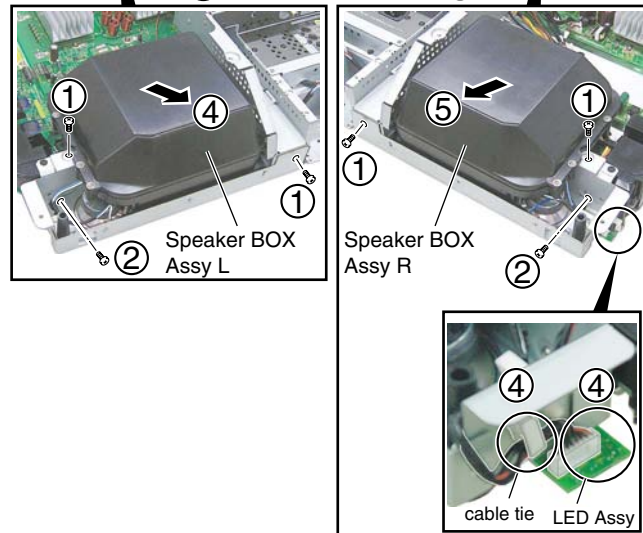
### ● Speaker BOX Assy R

- ① Remove the three screws.
- ② Remove the one screw.  
(As this screw is made of stainless steel, it does not cling to a magnetized screwdriver. Care must be taken not to drop and lose it.)
- ③ Disconnect the speaker cable.
- ④ Detach the cable from their cable ties and disconnect the cable.
- ⑤ Remove the speaker BOX Assy R.



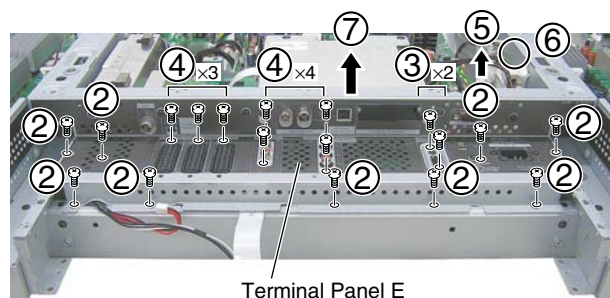
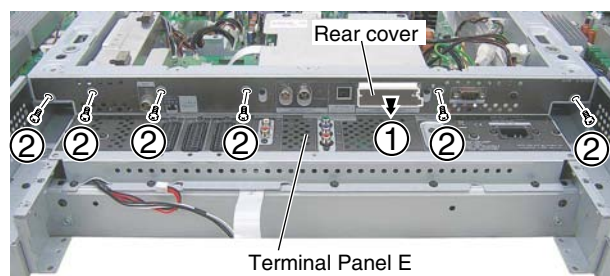
### ● Speaker BOX Assy L

- ① Remove the three screws.
- ② Remove the one screw.  
(As this screw is made of stainless steel, it does not cling to a magnetized screwdriver. Care must be taken not to drop and lose it.)
- ③ Disconnect the speaker cable.
- ④ Remove the speaker BOX Assy L.



## 6 Terminal Panel E

- ① Remove the rear cover.
- ② Remove the 15 screws.
- ③ Remove the two screws.
- ④ Remove the seven screws.
- ⑤ Disconnect the connector. (SR connector)
- ⑥ Disconnect the connector. (AC inlet)
- ⑦ Remove the terminal panel E.



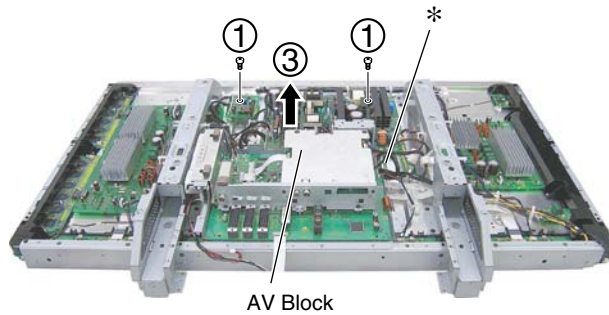
## 7 AV Block

① Remove the two screws.

② Disconnect cables, as required.

\* **Note:** Be careful in handling the shielded flexible cable that connects between the OBE MAIN and OB DIGITAL Assys.

③ Remove the AV Block.



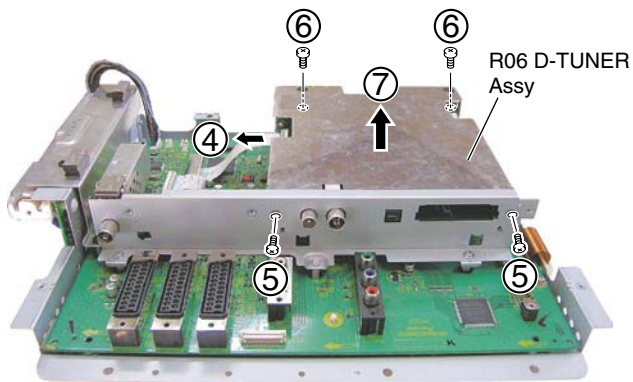
④ Disconnect the flexible cable.

⑤ Remove the two screws.

⑥ Remove the two screws.

⑦ Remove the R06 D-TUNER Assy.

PDP-436SXE  
only

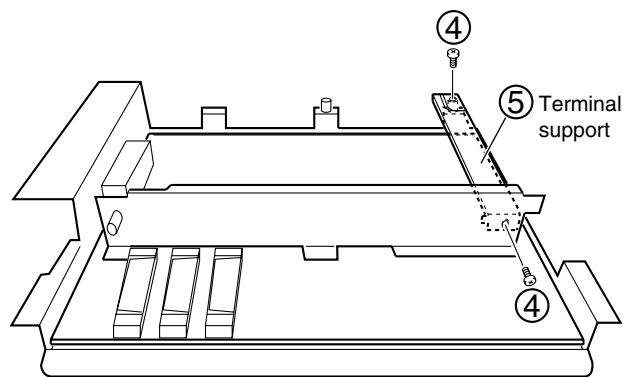


436SXE model

④ Remove the two screws.

⑤ Remove the terminal support.

PDP-436RXE  
only



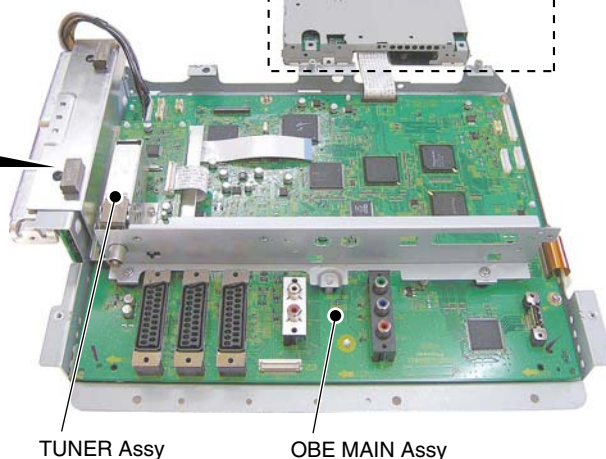
436RXE model

PDP-436SXE  
only

R06 D-TUNER Assy



AUDIO Assy



TUNER Assy

OBE MAIN Assy

## 8 Diagnosis and replacement of the OB DIGITAL Assy

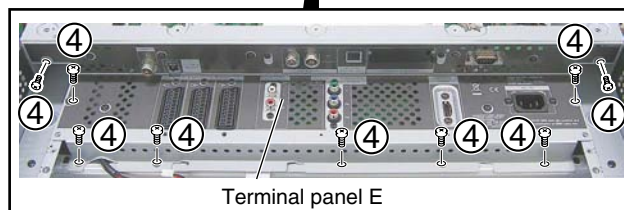
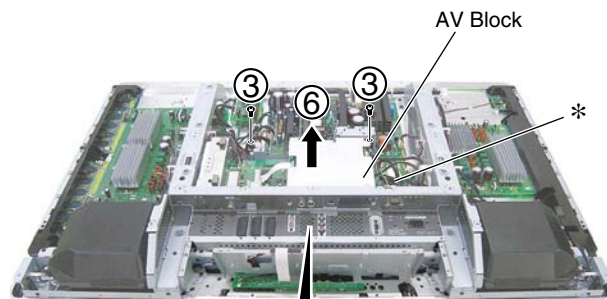
For diagnosis of the OB DIGITAL Assy, it is not necessary to remove all the parts mentioned above. To perform a diagnosis and replacement, follow the procedures below:

- ① Remove the rear case (436SX).  
(See the procedure 1.)
- ② Remove the under cover (436SX).  
(See the procedure 2.)

- ③ Remove the two screws.
- ④ Remove the nine screws.
- ⑤ Disconnect cables, as required.

\* **Note:** Be careful in handling the shielded flexible cable that connects between the OBE MAIN and OB DIGITAL Assys.

- ⑥ Remove the AV Block with the terminal panel E.



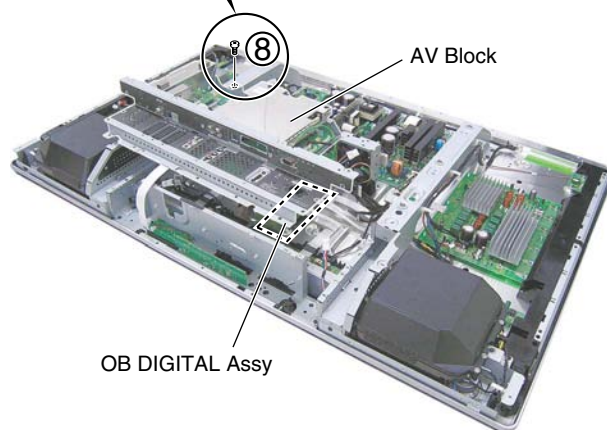
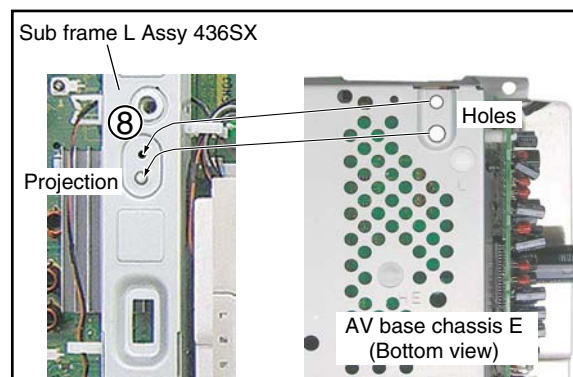
**Diagnosis**

**Replacement**

- ⑦ Dress the units, as shown in the photo.
- ⑧ Install the screw.

**Diagnosis**

- ⑦ Disconnect all cables on OB DIGITAL Assy.
- ⑧ Replace OB DIGITAL Assy..



### Note:

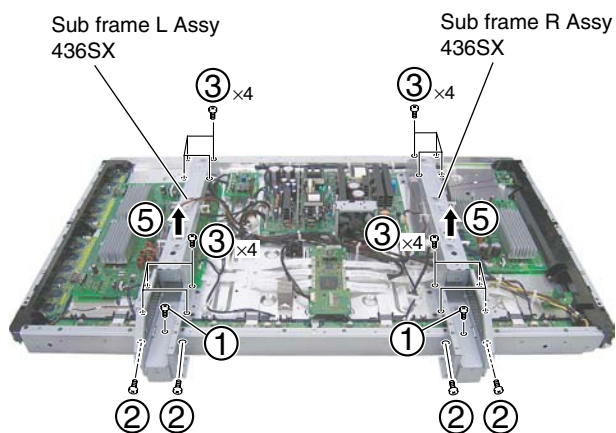
In this state, it is not possible to check the front inputs. If checking of the front inputs is necessary in this state, remove Terminal panel E then connect the Flexible Extension cable for servicing (GGD1170) between CN4001 on the OBE MAIN Assy and CN7804 on the FRONT Assy.

A

## 9 Sub Frame L and R Assy 436SX ~ Front Chassis H Assy 436SX

### ● Sub Frame L and R Assy 436SX

- ① Remove the one screw each from the sub frame L and R Assys.
- ② Remove the two screws each from the L and R Assys.
- ③ Remove the eight screws each from the L and R Assys.
- ④ Detach the cables from their cable ties, as required.
- ⑤ Remove the sub frame L and R Assys 436SX.

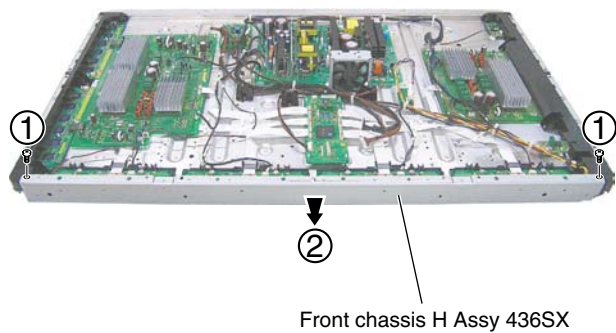


B

C

### ● Front Chassis H Assy 436SX

- ① Remove the two screws.
- ② Remove the front chassis H Assy 436SX.



D

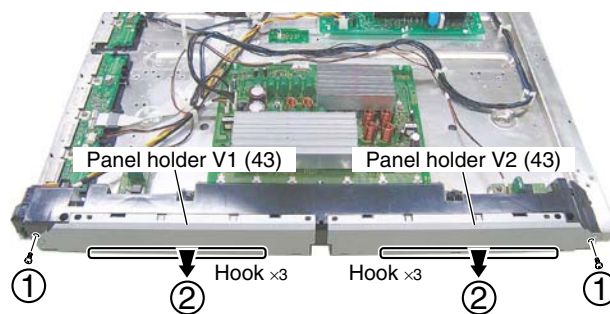
E

F

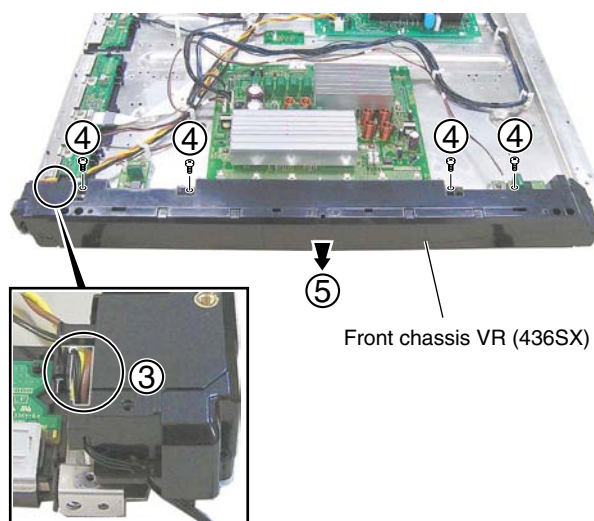


## 10 SUS CLAMP 1 and 2 Assys

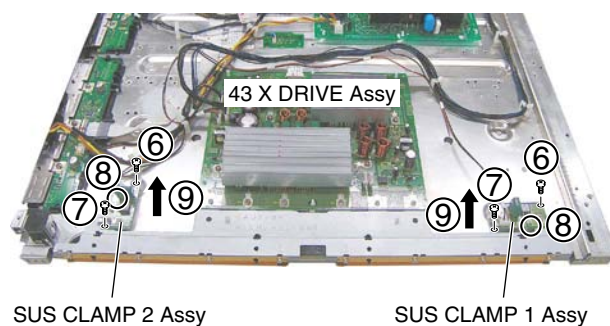
- ① Remove the two screws.
- ② Remove the panel holder V1 (43) and V2 (43)s.  
(Unhook the six hooks.)



- ③ Release the housing wire.
- ④ Remove the four screws.
- ⑤ Remove the front chassis VR (436SX).

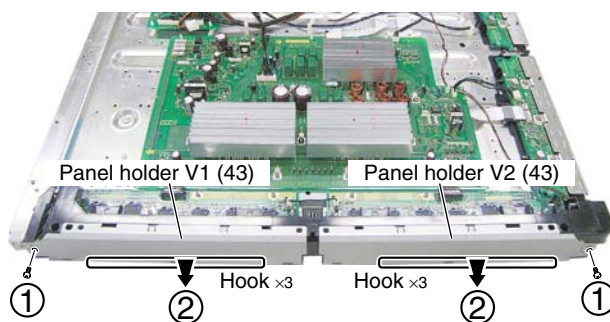


- ⑥ Remove the two screws.
- ⑦ Remove the two screws.
- ⑧ Unhook the two PCB spacers.
- ⑨ Remove the SUS CLAMP 1 and 2 Assys.

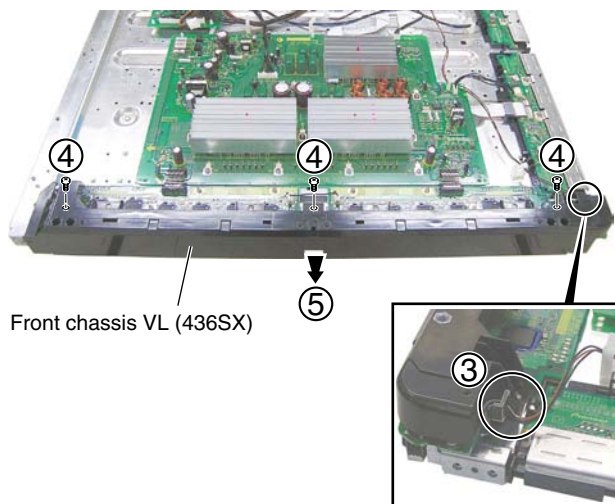


## 11 43 SCAN A and B Assys

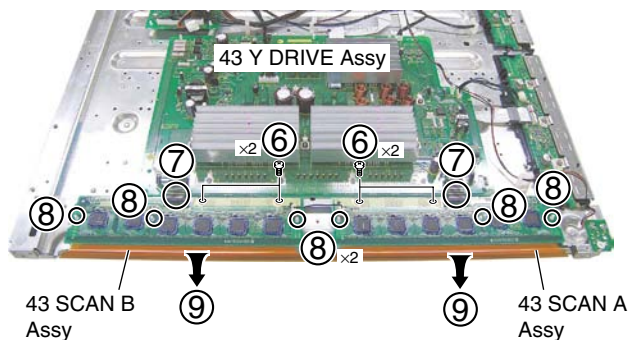
- ① Remove the two screws.
- ② Remove the panel holder V1 (43) and V2 (43)s.  
(Unhook the six hooks.)



- ③ Release the housing wire.
- ④ Remove the three screws.
- ⑤ Remove the front chassis VL (436SX).



- ⑥ Remove the four screws.
- ⑦ Disconnect the two pin connectors.
- ⑧ Unhook the six PCB spacers.
- ⑨ Remove the 43 SCAN A and B Assys.

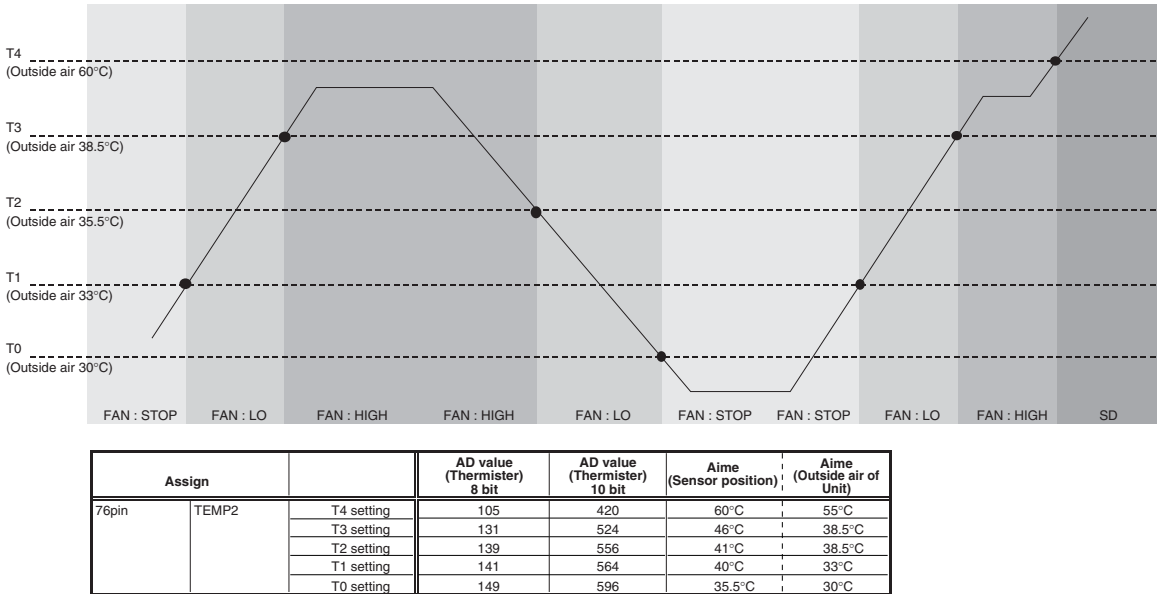


## 7.2 DESCRIPTION

### 7.2.1 SPECIFICATION ABOUT THE THERMAL PROTECTION

\* The change of HI / LO have hysteresis curve below.

#### Reading value of the season and FAN drive.



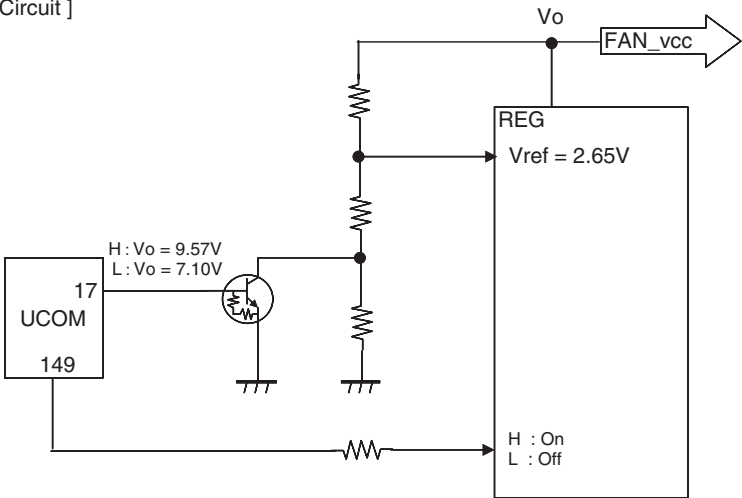
This model controls the FAN drive by MAIN u-com pin 149 (FAN ON / OFF) pin 17 (Cange of FAN control voltage) , not by the traditional PWM.

Assign	FAN : HIGH	FAN : LO	STOP
IC5206 149pin FAN_CONT	H	H	L
IC5206 17pin FAN_CONT_POW	H	L	-

#### Set State and FAN Drive

POWER	PSW1	State	Control	FAN Operation
ON	ON	ON	According to the reading value of above table sensor.	ON (HIGH/LO/STOP)
ON	ON	DT_REC	According to the reading value of above table sensor.	ON (HIGH/LO/STOP)
OFF		STB	FAN CONT	OFF

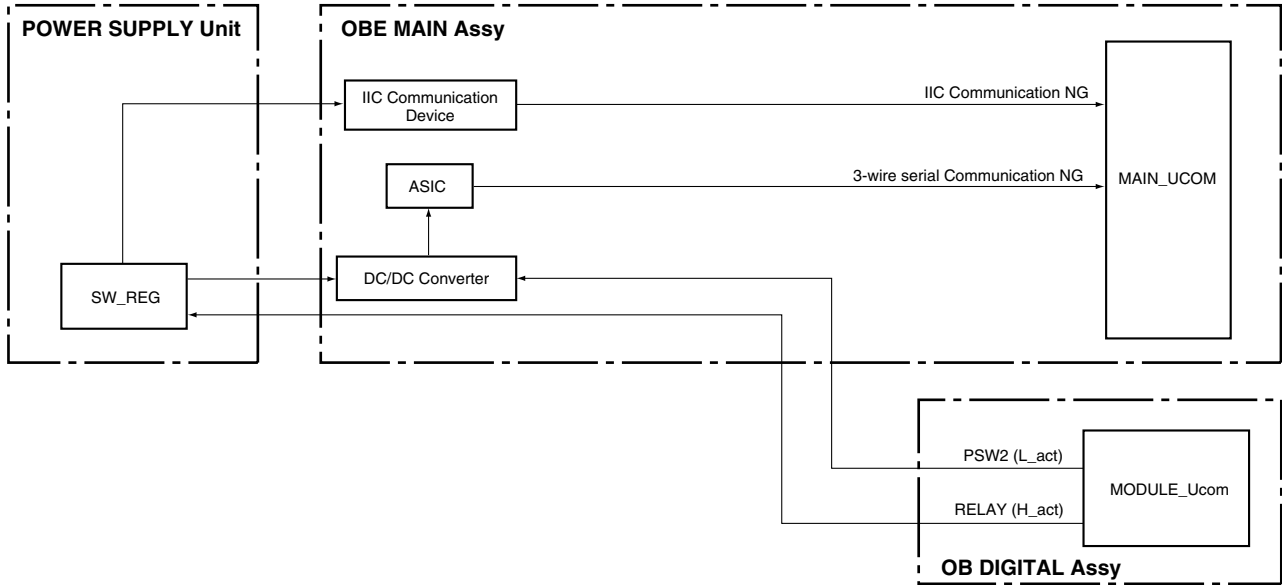
[ Outline Circuit ]



7.2.2 PROCESSING IN ABNORMALITY

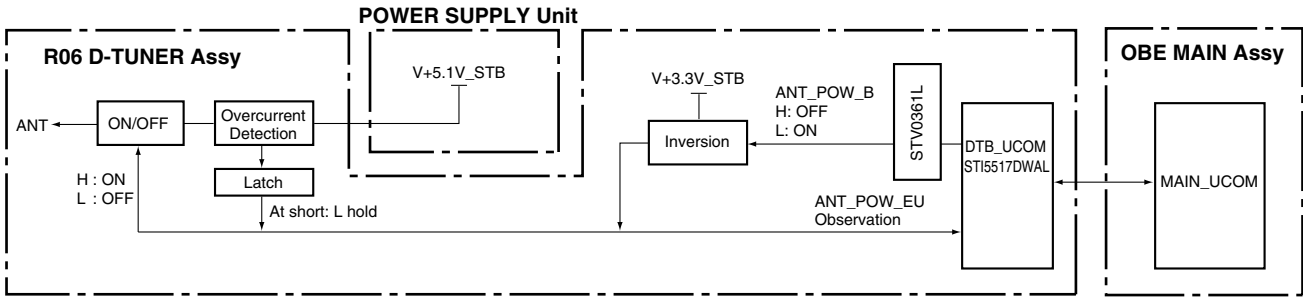
Power supply and DC-DC converter

Circuit diagram



Power supply for DTB Antenna (436SX Model Only)

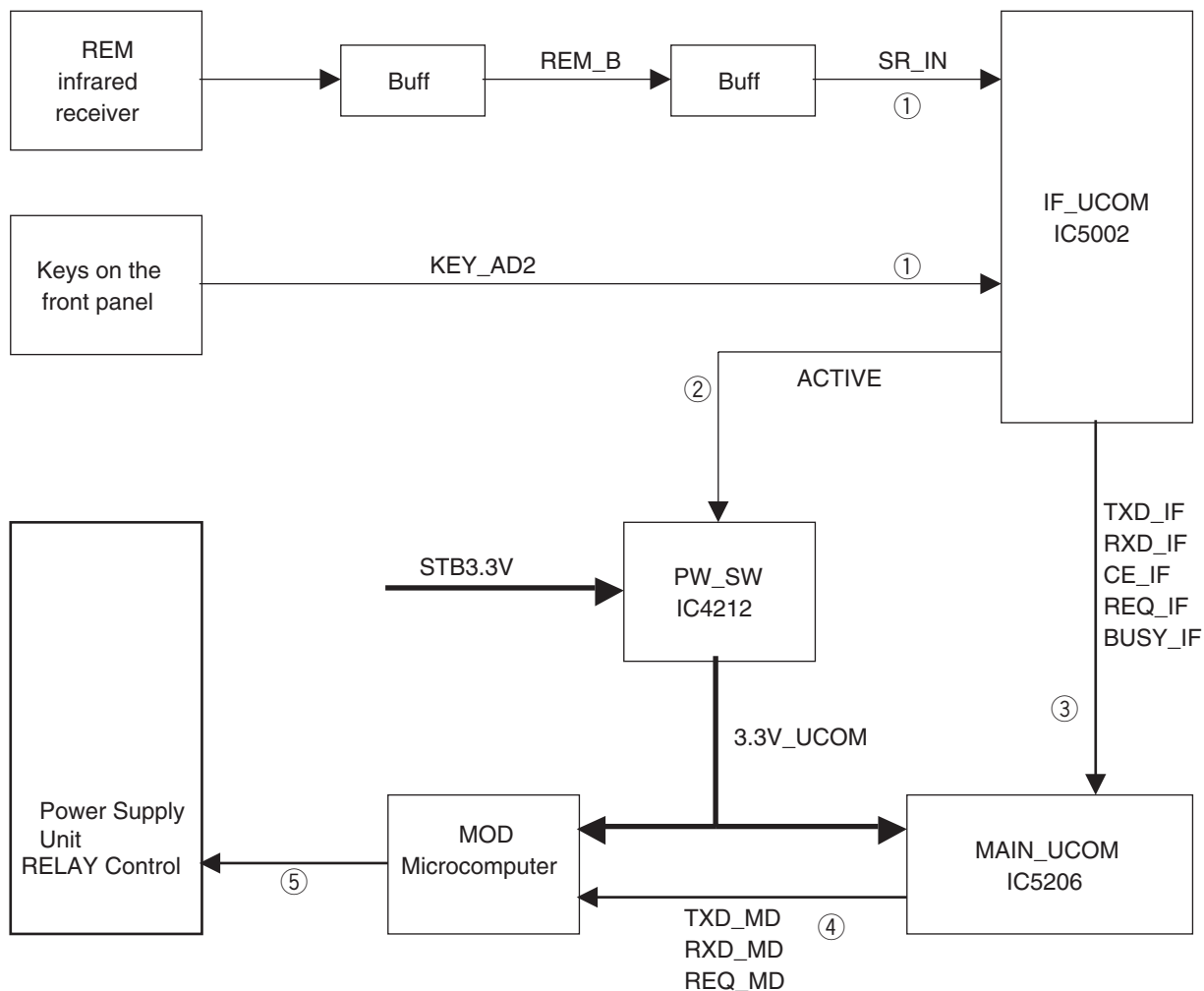
Circuit diagram



Specifications for port monitoring

Port Name	SD/PD Indication	Assigned Pin	Active
ANT_POW_EU	DTB antenna short-circuit	IF_37	Warning with L

## POWER ON SEQUENCE



- ① : The signal from the remote control unit (or a key signal) is input to the IF microcomputer.  
 ② : The IF microcomputer supplies the power to the main microcomputer and MOD microcomputer.  
 ③ : The IF microcomputer transmits operation data from the remote control unit (or keys) to the main microcomputer.  
 ④ : The main microcomputer issues a startup command to the MOD microcomputer.  
 ⑤ : The MOD microcomputer controls the relay of the PDP Power supply unit and starts the power-on sequence of the PDP.

## 7.3 IC

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

### ● List of IC

MB91305PMC-G-BND, M30620FCPGP-U5C, R2S11002AFT, R2S11001FT, UPD64015AGM-UEU AD9985KSTZ-110, SII9021CTU, AXF1149, SN755870PZT, AXF1143, AXF1145, TC74VHC08FTS1, AXF1144, M62334FP, TC74VHC123AFTS1, PST3610UR, PEG122C, NJW1183GK1

### ■ MB91305PMC-G-BND(OBE MAIN ASSY:IC5206)

- MAIN Microcomputer

### ● Pin Function

No.	Pin Name	Signal Name	I/O	Function	Active
1	VCEE			Vcc (+3.3V)	
2	VSS			GND	
3	VCCI			Vcc (+1.8V)	
4	D24			External Data-bus	
5	D25			External Data-bus	
6	D26			External Data-bus	
7	D27			External Data-bus	
8	D28			External Data-bus	
9	D29			External Data-bus	
10	D30			External Data-bus	
11	D31			External Data-bus	
12	VCEE			Vcc (+3.3V)	
13	VSS			GND	
14	VCCI			Vcc (+1.8V)	
15	RDX			External bus lead strobe	
16	WR0X/DQMUU			External bus lead strobe	
17	WR1X/DQMUL/P30	FAN_CONT_POW	O	Fan output power control (Fan Vcc 7.1/9.5 change)	H
18	CS0X/P31			External bus chip enable	
19	CS1X/P32	CE_IF	O	3 wire serial communication with UIF ucom_Enable old IF_CE	L
20	CS4X/P33	A_MUTE	O	MDR audio output mute	H
21	CS5X/P34	AM_MUTE	O	Audio Monitor output mute	H
22	CS6X/P35		O		
23	CS7X/P36		O		
24	RDY/P37	BUSY_IC3	I	3 wire serial communication with Carrera - Busy Old IC3_BUSY.	H
25	BGRNTX/P40	BUSY_IF	I	3 wire serial communication with UIF ucom-Busy - Old IF_BUSY.	H
26	BRQ/P41	WE_IC3	O	UART path switch for Carrera	L
27	SYSCLK/P42	WATCH_DOG	O	Checking terminal with TP	-
28	MCLKE/P43	PSW1	O	Power SW1 (DC-DC converter output mute)	L
29	MCLK/P44	SD_DET	O	Checking terminal with TP	-
30	ASX/LBAX/SRASX/P45	RST_IF	O	Reset input terminal for IF ucom (Not used)	H
31	BAAX/SCASX/P46	WE_ROM	O	Write protect of EDID-ROM for PC	H
32	WRX/SWRX/P47	CE_IC3	O	3 wire serial communication with Carrera-Enable Old IC3_CE	L
33	VCEE			Vcc (+3.3V)	
34	VSS			GND	
35	VCCI			Vcc (+1.8V)	
36	A00			N.C. setting	
37	A01			Eternal address bus	
38	A02			Eternal address bus	
39	A03			Eternal address bus	
40	A04			Eternal address bus	

No.	Pin Name	Signal Name	I/O	Function	Active
41	A05			Eternal address-bus	
42	A06			Eternal address-bus	
43	A07			Eternal address-bus	
44	A08			Eternal address-bus	
45	A09			Eternal address-bus	
46	A10			Eternal address-bus	
47	A11			Eternal address-bus	
48	A12			Eternal address-bus	
49	A13			Eternal address-bus	
50	A14			Eternal address-bus	
51	A15			Eternal address-bus	
52	VCEE			Vcc (+3.3V)	
53	VSS			GND	
54	VCCI			Vcc (+1.8V)	
55	A16/P50			Eternal address-bus	
56	A17/P51			Eternal address-bus	
57	A18/P52			Eternal address-bus	
58	A19/P53			Eternal address-bus	
59	A20/P54			Eternal address-bus	
60	A21/P55				
61	A22/P56	ELITE_DET	I	SXE/RXE discrimination	
62	A23/P57	APPLI_ON	I	Detection of ASIC testing connection	L
63	VCEE			Vcc (+3.3V)	
64	X0		I	Clock output	
65	VSS			GND	
66	X1		O	Clock output	
67	VCCI			Vcc (+1.8V)	
68	INTX			External reset input	
69	MD0		I	Operation mode setting L_fixed	
70	MD1		I	Operation mode setting H_fixed (No USB)	
71	MD2		I	Operation mode setting normal_L, writing_H	
72	MD3		I	Operation mode setting L_fixed	
73	AVCC			Vcc for A/D	
74	AVRH			Reference Vcc for A/D	
75	AVSS/AVRL			GND for A/D	
76	AN0	TEMP2	I	[A/D] Thermal sensor outside air temperature	AD
77	AN1				AD
78	AN2/PF0	MODE	I	[A/D] Operation mode discrimination	AD
79	AN3/PF1	AFT1	I	[A/D] AFT input 1	AD
80	AN4/PF2				
81	AN5/PF3				
82	AN5/PF4				
83	AN7/PF5				
84	AN8/PF6	CE_IC6	O	3 wire serial communication with Triton-Enable (Not Used)	L
85	AN9/PF7	REQ_MVDEC	I	Change information of various detecting result like frequency determination	L
86	ICS0			Status output for development tool	
87	ICS1			Status output for development tool	

A

No.	Pin Name	Signal Name	I/O	Function	Active
88	ICS2			States output for development tool	
89	ICD0			States output for development tool	
90	ICD1			States output for development tool	
91	ICD2			States output for development tool	
92	ICD3			Break for development tool	
93	IBREAK			Clock for development tool	
94	ICLK			Reset for development tool	
95	TRSTX			Reset for development tool	
96	VCEE			Vcc (+3.3V)	
97	VSS			GND	
98	VCCI			Vcc (+1.8V)	
99	SIN0/P60	RXD_WR	I	External PC/FLASH ROM writer / PC card sharing	L
100	SOUT0/P61	TXD_WR	O	External PC/FLASH ROM writer / PC card sharing	L
101	SCK0/P62	CLK_WR	I	Communication with FLASH ROM writer-Clock input	L
102	SIN1/P63	RXD_DT	I	UART communication with degital tuner-data input	L
103	SOUT1/P64	TXD_DT	O	UART communication with degital tuner-data output	L
104	SCK1/P65		I	Not Used	
105	SIN2/P70	RXD_IF	I	3 wire/serial communication with UIF-data input	L
106	SOUT2/P71	TXD_IF	O	3 wire/serial communication with UIF-data output	L
107	SCK2/P72	CLK_IF	O	3 wire/serial communication with UIF-clock output	L
108	SIN3/P73	RXD_MD	I	UART communication with module ucom-data input	L
109	SOUT3/P74	TXD_MD	O	UART communication with module ucom-data output	L
110	SCK3/P75	RST_ASIC	O	Forced reset of ASIC	L
111	SIN4/P80	RXD_IC3	I	3 wire serial communication with Carrera-data input	L
112	SOUT4/P81	TXD_IC3	O	3 wire serial communication with Carrera-data output	L
113	SCK4/P82	CLK_IC3	O	3 wire serial communication with Carrera-clock input	L
114	SCL0/P83	SCL_AV3	O	IIC communication for operating device at function STB-clock output	L
115	SDA0/P84	SDA_AV3	I/O	IIC communication for operating device at function STB-data in/out	L
116	SCL1/P90	SCL_MA	O	IIC communication for operating device at function STB-clock output	L
117	SDA1/P91	SDA_MA	I/O	IIC communication for operating device at function STB-data in/out	L
118	SCL2/P92	SCL_TXT	O	IIC communication for TELE TEXT-clock output	L
119	SDA2/P93	SDA_TXT	I/O	IIC communication for TELE TEXT-data in/out	L
120	SCL3/P94		O		
121	SDA3/P95		O		
122	SCL4/P96	SCL_EP	O	IIC communication for EEPROM-clock output	L
123	SDA4/P97	SDA_EP	I/O	IIC communication for EEPROM-data in/out	L
124	VCEE			Vcc (+3.3V)	
125	VSS			GND	
126	VCCI			Vcc (+1.8V)	
127	NMIX				
128	INT0/PA0	RST2	I	(Interrupt) Detection of ASIC Power RSTIC	L
129	INT1/PA1	RST3	I	(Interrupt) Detection of AC temporary black out	L
130	INT2/PA2	HDMI_INT	I	(Interrupt) Interruption of HDMI Infopacket change (HDMI①)	L
131	INT3/PA3	REQ_IF	I	Communication demand from UIF ucom	H
132	INT4/PA4	REQ_IC3	I	Communication demand from Carrera (sig-mode change)	H
133	INT5/PA5		O	backup (interrupt)	
134	INT6/PA6	REQ_MD	I	Communication demand from module ucom	H



No.	Pin Name	Signal Name	I/O	Function	Active
135	INT7/PA7	RST_TXT		Reset detection of CCD ucom / M2 ucom	L
136	INT8/PB0				
137	INT9/PB1				
138	INT10/ATRG/PB2				
139	INT11/FRCK/PB3				
140	INT12/ICU0/PB4	SCL_AIR	I	IIC communication for Analog tuner only-clock output	L
141	INT13/ICU1/PB5	SDA_AIR	O	IIC communication for Analog tuner only-data in/out	L
142	INT14/ICU2/PB6	REQ_PEAK_M	I	Communication demand from Carrera (peak detection of Silvia side inside Triton)	H
143	INT15/ICU3/PB7	REQ_PEAK_S	I	Communication demand from Carrera (peak detection of SCarrera side inside Triton)	H
144	VCEE			Vcc (+3.3V)	
145	UDP			USB + terminal (Not Used)	
146	UDM			USB - terminal (Not Used)	
147	VSS			GND	
148	VCCI			Vcc (+1.8V)	
149	PPG0/PC0	FAN_CONT	O	FAN power ON/OFF control	H
150	PPG1/PC1				
151	PPG2/PC2	TXT-WRB	I	BUSY information when rewiting TXT (old TXT_WKP) FLASH	
152	PPG3/PC3				
153	TOUT0/TRG0/PC4	WE_MD	O	UART path switch for module ucom	L
154	TOUT1/TRG1/PC5	DT_FNC	O	Buffer OFF control for/digital tuner relay board at function STB	L
155	TOUT2/PC6	FAN_NG1	I	NG signal / detection from FAN	H
156	RIN/PC7	WE_DT	O	UART path switch for / digital tuner	L
157	DREQ0/PD0				
158	DACK0/PD1	DT_DET	O	Presence detection of DT	L
159	DEOP0/PD2	RST_DT	I	Output for digital tuner reset	L
160	DREQ1/TIN0/PD3	AIR1_H	I	Reload timer input (terrestrial H frequency count1)	L
161	DACK1/TIN1/PD4				
162	DEOP1/TIN2/PD5	PD5	I	Detection of writing sequence from FLASH ROM (synchronous ↔ asynchronous)	H
163	DREQ2/TRG1/PE0	WE_TXT	O	UART path switch for text ucom (CC & TELE TEXT)	H
164	DACK2/TRG2/PE1	DEMP	O	HDMI Audio deemphasis band compeusation	H
165	DEOP2/TRG3/PE2	EEPRST	O	Reset SW for EEPROM power	L
166	VCEE			Vcc (+3.3V)	
167	VSS			GND	
168	VCCI			Vcc (+1.8V)	
169	D16/P20			External data bus	
170	D17/P21			External data bus	
171	D18/P22			External data bus	
172	D19/P23			External data bus	
173	D20/P24			External data bus	
174	D21/P25			External data bus	
175	D22/P26			External data bus	
176	D23/P27			External data bus	

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## ■ M30620FCPGP-U5C(OB DIGITAL ASSY:IC3151)

• MODULE Microcomputer

### ● Pin Function

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No.	Pin Name	Signal Name	I/O	Function	Active
1	P94//DA1/TB4IN	V_SYNC	I	V synchronous detection	L
2	P93/DA0/TB3IN		O		
3	P92/TB2IN/SOUT3	TXD_SQ	O	3 serial communication with AsiRA-data send	
4	P91/TB1IN/SIN3	RXD_SQ	I	3 serial communication with AsiRA-data receive	
5	P90/TB0IN/CLK3	CLK_SQ	O	3 serial communication with AsiRA-clock output	
6	BYTE	BYTE	I	(Connected to GND)	
7	CNVSS	CNVSS	I	Terminal for processor mode setting (pull-down)	
8	P87/XCIN				
9	P86/XCOUT				
10	*RESET	RST_MD	I	Reset input	L
11	XOUT	XOUT	O	Output for main clock	-
12	VSS	VSS	-	GND	-
13	XIN	XIN	I	Input for main clock	-
14	VCC1	VCC1	-	Vcc-STB 3.3V	-
15	P85/*NMI	NMI	I	(Pull-up)	
16	P84/*INT2				
17	P83/*INT1				
18	P82/*INT0	RST2	I	[Interrupt] Astra reset detection	L
19	P81/TA4IN/*U				L
20	P80/TA4OUT/U				H
21	P77/TA3IN				
22	P76/TA3OUT				
23	P75/TA2IN/*W	STOP_SQ		Wathcdog of ASTRA (Not Used)	
24	P74/TA2OUT/W				
25	P73/*CTS2/*RTS2/TA1IN/*V				
26	P72/CLK2/TA1OUT/V	EEPRST	O	Power SW for EEPROM	H
27	P71/RXD2/SCL2/TA0IN/TB5IN	E_SCL	O	IIC clock output for EEPROM	
28	P70/TXD2/SDA2/TA0OUT	E_SDA	I/O	IIC data in/out for EEPROM	
29	P67/TXD1/SDA1	TXD	O	Communication with FLASH ROM writer-data send	
30	P66/RXD1/SCL1	RXD	I	Communication with FLASH ROM writer-data receive	
31	P65/CLK1	SCLK	I	Communication with FLASH ROM writer-clock input	
32	P64/*CTS1/*RTS1/CLKS1	BUSY	O	Communication with FLASH ROM writer-busy output	?
33	P63/TXD0/SDA0	TXD_MAIN	O	UART communication with main ucom (external PC) -data send	
34	P62/RXD0/SCL0	RXD_MAIN	I	UART communication with main ucom (external PC) -data receive	
35	P61/CLK0				
36	P60/*CTS0/*RTS0	REQ_MD	O	Communication demand to main ucom	H
37	P57/*RDY/CLKOUT		O		
38	P56/ALE		O		
39	P55/*HOLD	EPM	I	Terminal for FLASH re-writing mode setting	
40	P54/*HLDA	DRF_B	O	Large-power line OFF	L

No.	Pin Name	Signal Name	I/O	Function	Active
41	P53/BCLK	RELAY	O	Power ON control output	H
42	P52/*RD		O		
43	P51/*WRH/*BHE		O	Terminal for FLASH re-writing mode setting	
44	P50/*WRL/*WR	CE	I		
45	P47/*CS3	PSIZE	I	Panel size discrimination	H:43
46	P46/*CS2	SCL	O	IIC clock output	H
47	P45/*CS1	SDA	I/O	IIC data in/out	H
48	P44/*CS0	PD_MUTE_B	O	Muting the power-down output to power Assy	L
49	P43/A19				
50	P42/A18				
51	P41/A17	H_DET_B	I	H existence discrimination	L
52	P40/A16		O		
53	P37/A15	RST_SQ	O	Forced reset of ASTRA (100ms after releasing RST2)	L
54	P36/A14	CE_SQ	O	Enable for ASTRA communication	L
55	P35/A13	BUSY_SQ	I	BUSY input for ASTRA communication	H
56	P34/A12	FUT1_SQ	O	Communication reseive to ASTRA	
57	P33/A11	FUT2_SQ	O	Communication reseive to ASTRA	
58	P32/A10		O		
59	P31/A9	WE_SQ	O	Communication path selection control when rewriting ASTRA	H
60	VCC2	VCC2	-	Vcc-STB 3.3V	-
61	P30/A8(/-/D7)	PD_TRG	I	PD detection	L
62	VSS	VSS	-	GND	-
63	P27/AN27/A7(/D7/D6)	SCAN_PD	I	PD for SCAN reduced voltage	H
64	P26/AN26/A6(/D6/D5)	YDRV_PD	I	Y drive PD signal	H
65	P25/AN25/A5(/D5/D4)	YSUS_PD	I	Y-SUSPD signal	H
66	P24/AN24/A4(/D4/D3)	YDCDC_PD	I	Y drive DCDC converter PD signal	H
67	P23/AN23/A3(/D3/D2)	SCN5V_PD	I	PD for SCAN 5V reduced voltage	H
68	P22/AN22/A2(/D2/D1)	XSUS_PD	I	X drive PD signal	H
69	P21/AN21/A1(/D1/D0)	XDCDC_PD	I	X drive DCDC converter PD signal	H
70	P20/AN20/A0(/D0/-)	XDRV_PD	I	X drive PD signal	H
71	P17/D15/*INT5		O		
72	P16/D14/*INT4		I		
73	P15/D13/*INT3		I		
74	P14/D12				
75	P13/D11	A_MUTE	O	Audio mute	H
76	P12/D10	A_NG	I	Audio NG detection	L
77	P11/D9	PSW2	O	Various power output mute at function STB	H
78	P10/D8	STB_SW	O	Stand-by setting of Audio AMP	L
79	P07/AN17/D7	ADRS_PD	I	Adress PD	H
80	P06/AN16/D6				
81	P05/AN15/D5				
82	P04/AN14/D4				
83	P03/AN13/D3				
84	P02/AN12/D2	DDC_PD	I	DC-DC converter PD signal	H
85	P01/AN11/D1	PS_PD	I	PD signal inside Power Assy	H

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No.	Pin Name	Signal Name	I/O	Function	Active
86	P00/AN10/D0	SQ_PD	I	PD for ASTRA drive halt	H
87	P107/AN07/*KI3		O		
88	P106/AN06/*KI2				
89	P105/AN05/*KI1		O		
90	P104/AN04/*KI0				
91	P103/AN03		O		
92	P102/AN02	TEMP1	I	[A/D] AD/input for thermal sensor	
93	P101/AN01	MODE	I	[A/D] Terminal for seeting operation mode	
94	AVSS	AVSS	-	GND for A/D input	-
95	P100/AN00				
96	VREF	VREF	-	Relererce voltage for A/D input	-
97	AVCC	AVCC	-	Vcc for A/D input-STB 3.3V	-
98	P97/*ADTRG/SIN4		O		
99	P96/ANEX1/SOUT4		O		
100	P95/ANEX0/CLK4		O		

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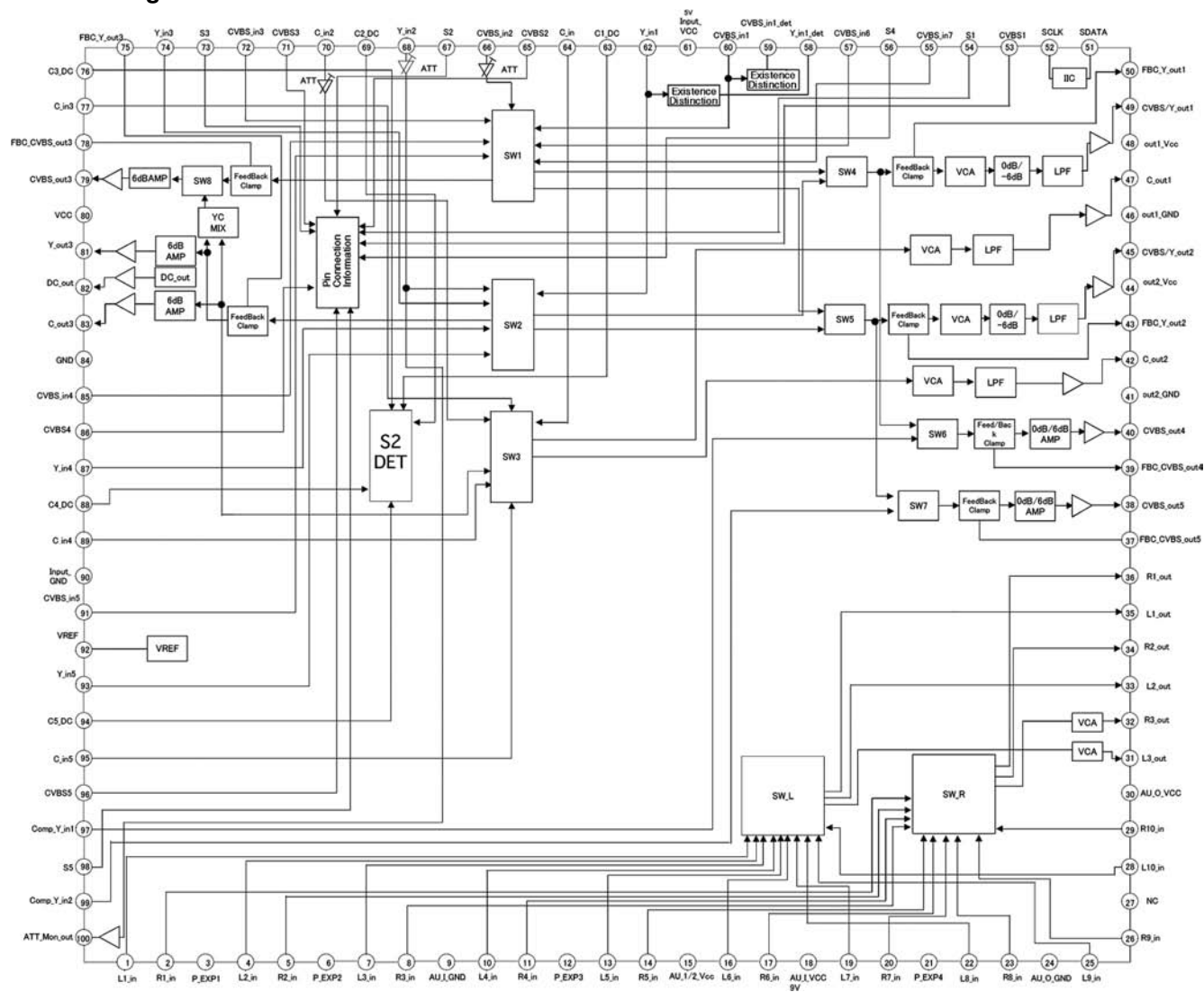
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# R2S11002AFT (OBE MAIN ASSY: IC4804)

• AV SW

## Block Diagram



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# R2S11001FT (OBE MAIN ASSY: IC4806)

• Component SW IC

## • Block Diagram

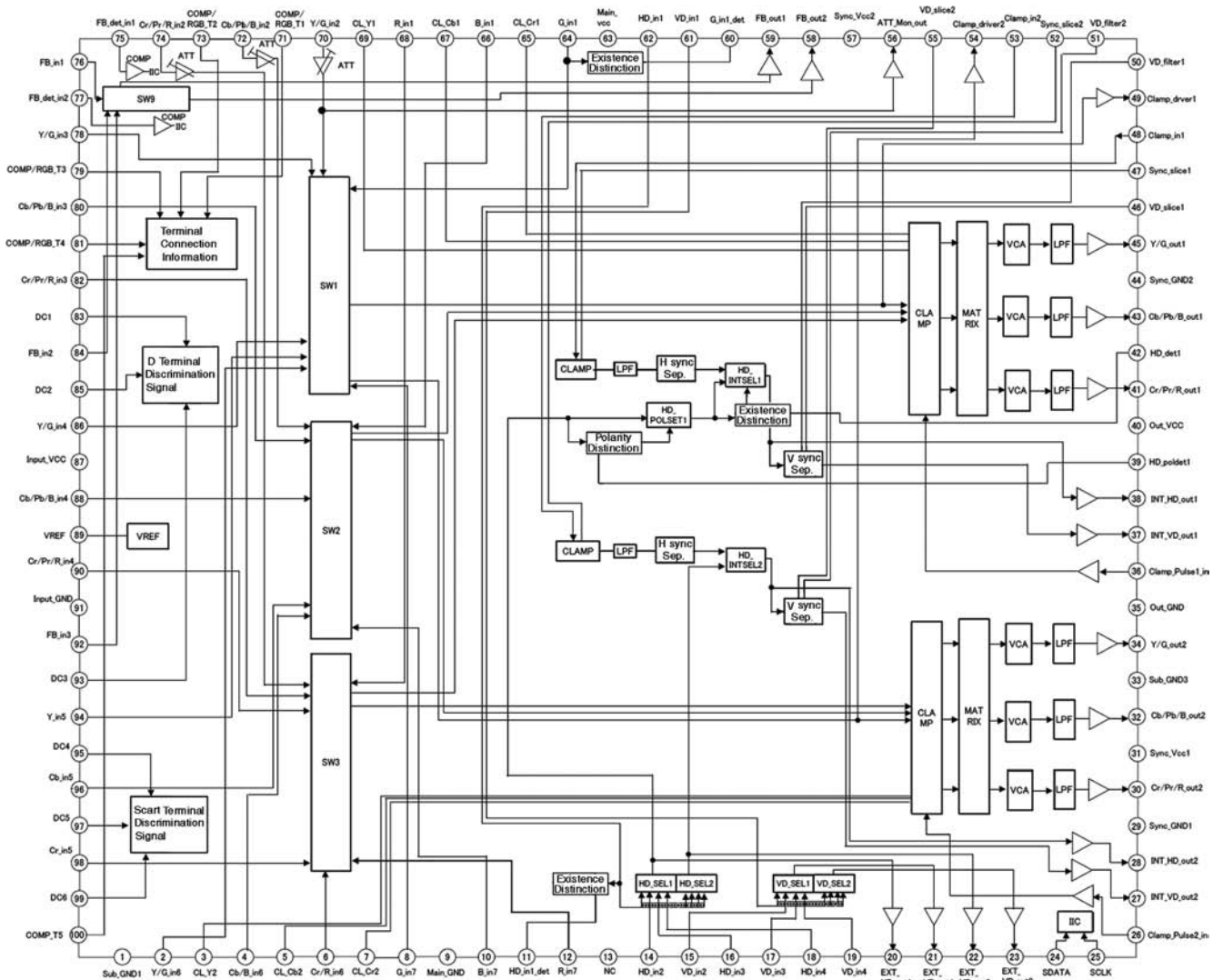
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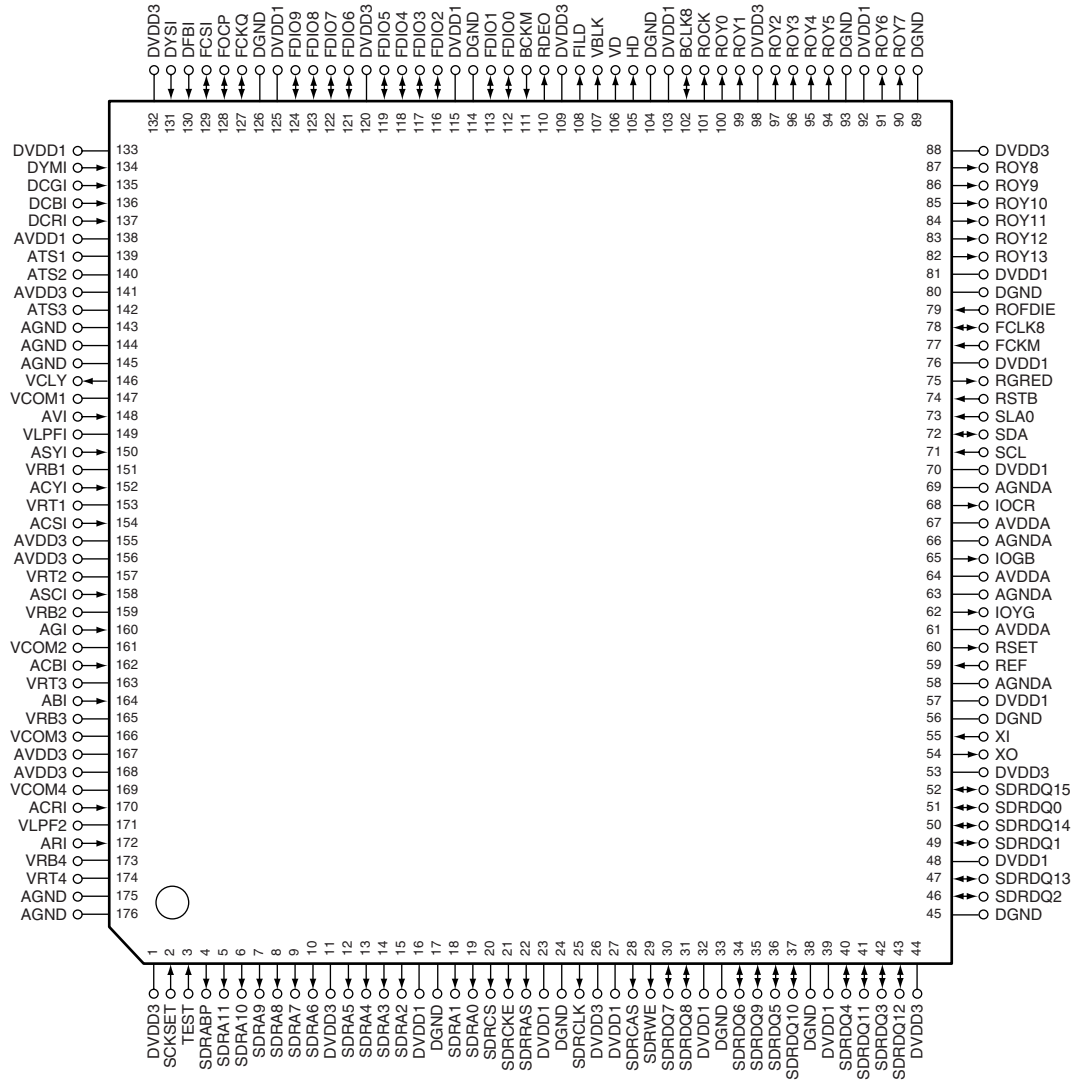
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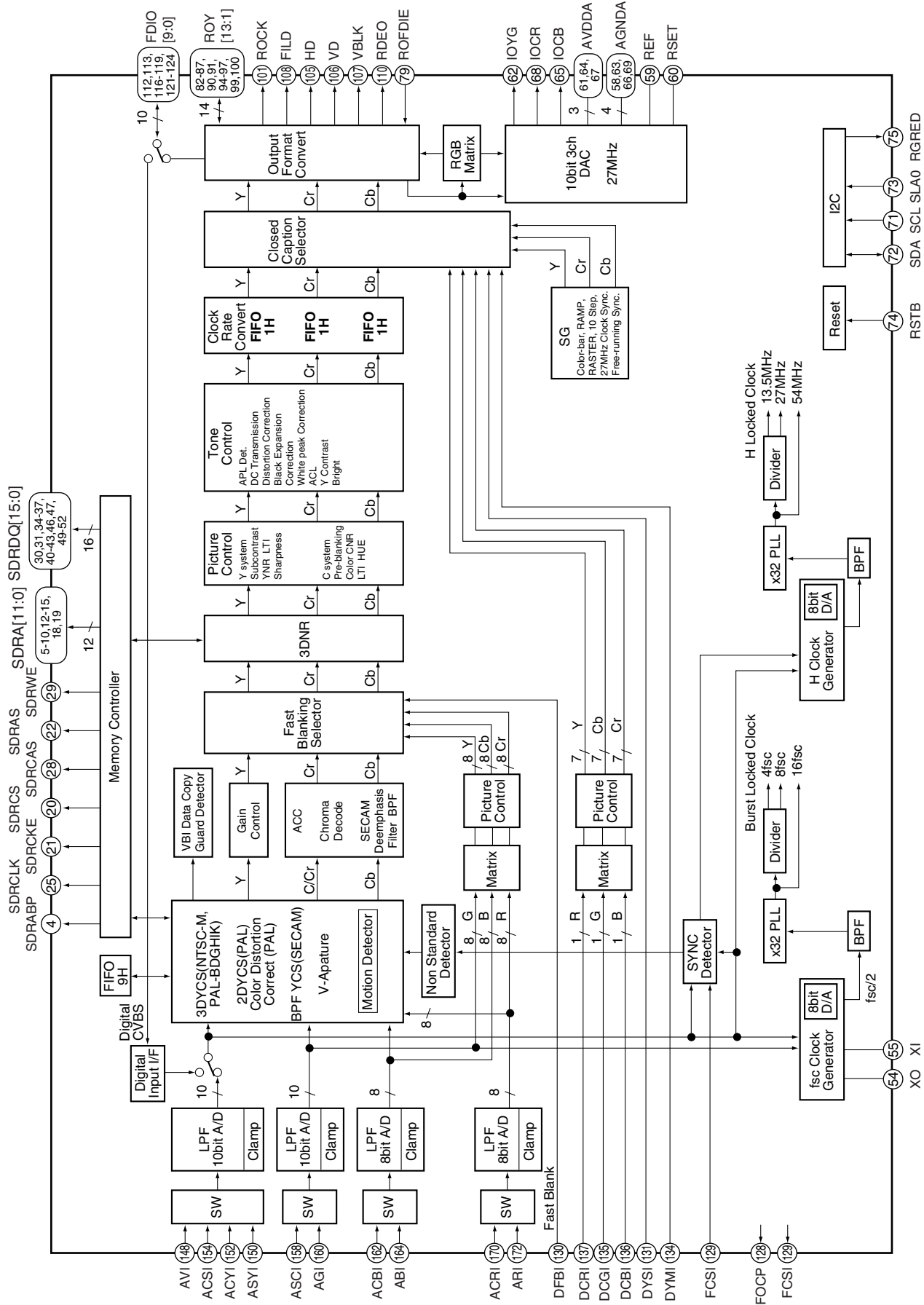
# UPD64015AGM-UEU (OBE MAIN ASSY : IC6003)

• Video Decoder (for main screen)

## Pin Arrangement (Top view)



# ● Block Diagram





## ● Pin Function

No.	Pin Name	I/O	Pin Function
1	DVDD3	–	Digital power supply (3.3V)
2	SCKSET	I	Test mode selection (L: Normal, H: Test mode)
3	TEST	I	Test setting (L: Normal, H: Test mode)
4	SDRABP	O	All bank precharge output for external memory (Active High)
5	SDRA11	O	Address output for external memory
6	SDRA10	O	Address output for external memory
7	SDRA9	O	Address output for external memory
8	SDRA8	O	Address output for external memory
9	SDRA7	O	Address output for external memory
10	SDRA6	O	Address output for external memory
11	DVDD3	–	Digital power supply (3.3V)
12	SDRA5	O	Address output for external memory
13	SDRA4	O	Address output for external memory
14	SDRA3	O	Address output for external memory
15	SDRA2	O	Address output for external memory
16	DVDD1	–	Digital power supply (1.5V)
17	DGND	–	Digital ground
18	SDRA1	O	Address output for external memory
19	SDRA0	O	Address output for external memory
20	SDRCS	O	Chip select output for external memory (Active Low)
21	SDRCKE	O	Clock enable output for external memory (Active High)
22	SDRRAS	O	Row address strobe output for external memory (Active Low)
23	DVDD1	–	Digital power supply (1.5V)
24	DGND	–	Digital ground
25	SDRCLK	O	Clock output for external memory
26	DVDD3	–	Digital power supply (3.3V)
27	DVDD1	–	Digital power supply (1.5V)
28	SDRCAS	O	Column address strobe output for external memory (Active Low)
29	SDRWE	O	Write enable output for external memory (Active Low)
30	SDRDQ7	I/O	Data input/output for external memory
31	SDRDQ8	I/O	Data input/output for external memory
32	DVDD1	–	Digital power supply (1.5V)
33	DGND	–	Digital ground
34	SDRDQ6	I/O	Data input/output for external memory
35	SDRDQ9	I/O	Data input/output for external memory
36	SDRDQ5	I/O	Data input/output for external memory
37	SDRDQ10	I/O	Data input/output for external memory
38	DGND	–	Digital ground
39	DVDD1	–	Digital power supply (1.5V)
40	SDRDQ4	I/O	Data input/output for external memory
41	SDRDQ11	I/O	Data input/output for external memory
42	SDRDQ3	I/O	Data input/output for external memory
43	SDRDQ12	I/O	Data input/output for external memory
44	DVDD3	–	Digital power supply (3.3V)
45	DGND	–	Digital ground
46	SDRDQ2	I/O	Data input/output for external memory
47	SDRDQ13	I/O	Data input/output for external memory
48	DVDD1	–	Digital power supply (1.5V)
49	SDRDQ1	I/O	Data input/output for external memory
50	SDRDQ14	I/O	Data input/output for external memory

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No.	Pin Name	I/O	Pin Function
51	SDRDQ0	I/O	Data input/output for external memory
52	SDRDQ15	I/O	Data input/output for external memory
53	DVDD3	–	Digital power supply (3.3V)
54	XO	O	Reference clock output Connect a 24.576MHz crystal.
55	XI	I	Reference clock input Connect a 24.576MHz crystal.
56	DGND	–	Digital ground
57	DVDD1	–	Digital power supply (1.5V)
58	AGNDA	–	Analog ground for DAC
59	REF	I	External reference input
60	RSET	O	Connect a 620 ohm resistor for external adjustment to AGND
61	AVDDA	–	Analog power supply for DAC (3.3V)
62	IOYG	O	Color-difference component Y / RGB component G output signal
63	AGNDA	–	Analog ground for DAC
64	AVDDA	–	Analog power supply for DAC (3.3V)
65	IOGB	O	Color-difference component Cb / RGB component B output signal
66	AGNDA	–	Analog ground for DAC
67	AVDDA	–	Analog power supply for DAC (3.3V)
68	IOCR	O	Color-difference component Cr / RGB component R output signal
69	AGNDA	–	Analog ground for DAC
70	DVDD1	–	Digital power supply (1.5V)
71	SCL	I	I <sup>2</sup> C bus clock input Connect to SCL line of the system.
72	SDA	I/O	I <sup>2</sup> C bus data input/output Connect to SDA line of the system.
73	SLA0	I	I <sup>2</sup> C bus slave address select input (L: B8h/B9h, H: BAh/BBh)
74	RSTB	I	System reset input (Active Low)
75	RGRED	O	I <sup>2</sup> C register read flag output (Active Low)
76	DVDD1	–	Digital power supply (1.5V)
77	FCKM	I	FCLK8 test mode selection (L: Normal, H: Test mode)
78	FCLK8	I/O	Line-lock clock monitor input/output
79	ROFDIE	I	Output enable of the video input/output terminal L: Output terminal Hi-Z, H: Output enable
80	DGND	–	Digital ground
81	DVDD1	–	Digital power supply (1.5V)
82	ROY13	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
83	ROY12	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
84	ROY11	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
85	ROY10	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
86	ROY9	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
87	ROY8	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
88	DVDD3	–	Digital power supply (3.3V)
89	DGND	–	Digital ground
90	ROY7	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
91	ROY6	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
92	DVDD1	–	Digital power supply (1.5V)
93	DGND	–	Digital ground
94	ROY5	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
95	ROY4	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
96	ROY3	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
97	ROY2	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
98	DVDD3	–	Digital power supply (3.3V)
99	ROY1	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
100	ROY0	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output

No.	Pin Name	I/O	Pin Function
101	ROCK	O	Clock for digital ITU-R BT. 656/component output
102	BCLK8	I/O	Line-lock clock monitor input/output
103	DVDD1	–	Digital power supply (1.5V)
104	DGND	–	Digital ground
105	HD	O	Horizontal sync. signal output
106	VD	O	Vertical sync. signal output
107	VBLK	O	V blanking output
108	FILD	O	Field output
109	DVDD3	–	Digital power supply (3.3V)
110	RDEO	O	Effective pixel area output
111	BCKM	I	Test mode selection of BCLK8 pin (L: Normal, H: Test mode)
112	FDIO0	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
113	FDIO1	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
114	DGND	–	Digital ground
115	DVDD1	–	Digital power supply (1.5V)
116	FDIO2	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
117	FDIO3	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
118	FDIO4	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
119	FDIO5	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
120	DVDD3	–	Digital power supply (3.3V)
121	FDIO6	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
122	FDIO7	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
123	FDIO8	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
124	FDIO9	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
125	DVDD1	–	Digital power supply (1.5V)
126	DGND	–	Digital ground
127	FCKQ	I/O	Sampling clock output for digital connection
128	FOCP	I/O	Clamp pulse output for digital connection / Timing output for digital RGB input (VD)
129	FCSI	I/O	Sync sep. signal input / Timing output for RGB input (HD)
130	DFBI	I	Fast blanking signal input for analog RGB input
131	DYSI	I	YS signal input for digital RGB input
132	DVDD3	–	Digital power supply (3.3V)
133	DVDD1	–	Digital power supply (1.5V)
134	DYMI	I	YM signal input for digital RGB input
135	DCGI	I	Digital RGB/G signal input
136	DCBI	I	Digital RGB/B signal input
137	DCRI	I	Digital RGB/R signal input
138	AVDD1	–	Analog power supply (1.5V)
139	ATS1	–	Analog test input Normally, connect to GND.
140	ATS2	–	Analog test input Normally, connect to GND.
141	AVDD3	–	Analog power supply (3.3V)
142	ATS3	–	Analog test input Normally, connect to GND.
143	AGND	–	Analog ground
144	AGND	–	Analog ground
145	AGND	–	Analog ground
146	VCLY	O	ADC1 clamp voltage
147	VCOM1	–	ADC1 common-mode reference voltage
148	AVI	I	ADC1 composite/Y signal input
149	VLPI	–	Analog test output Connect to GND via 0.1μF capacitor.
150	ASYI	I	ADC1 composite/Y signal input

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No.	Pin Name	I/O	Pin Function
151	VRB1	–	ADC1 bottom reference voltage
152	ACYI	I	ADC1 composite/Y signal input
153	VRT1	–	ADC1 top reference voltage
154	ACSI	I	ADC1 composite/Y signal input
155	AVDD3	–	Analog power supply for ADC (3.3V)
156	AVDD3	–	Analog power supply for ADC (3.3V)
157	VRT2	–	ADC2 top reference voltage
158	ASCI	I	ADC2 separate C signal input
159	VRB2	–	ADC2 bottom reference voltage
160	AGI	I	ADC2 RGB component G signal input
161	VCOM2	–	ADC2 common-mode reference voltage
162	ACBI	I	ADC3 color-difference component Cb signal input
163	VRT3	–	ADC3 top reference voltage
164	ABI	I	ADC3 RGB component B signal input
165	VRB3	–	ADC3 bottom reference voltage
166	VCOM3	–	ADC3 common-mode reference voltage
167	AVDD3	–	Analog power supply for ADC (3.3V)
168	AVDD3	–	Analog power supply for ADC (3.3V)
169	VCOM4	–	ADC4 common-mode reference voltage
170	ACRI	I	ADC4 color-difference component Cr signal input
171	VLPF2	–	Analog test output
172	ARI	I	ADC3 RGB component R signal input
173	VRB4	–	ADC4 bottom reference voltage
174	VRT4	–	ADC4 top reference voltage
175	AGND	–	Analog ground
176	AGND	–	Analog ground

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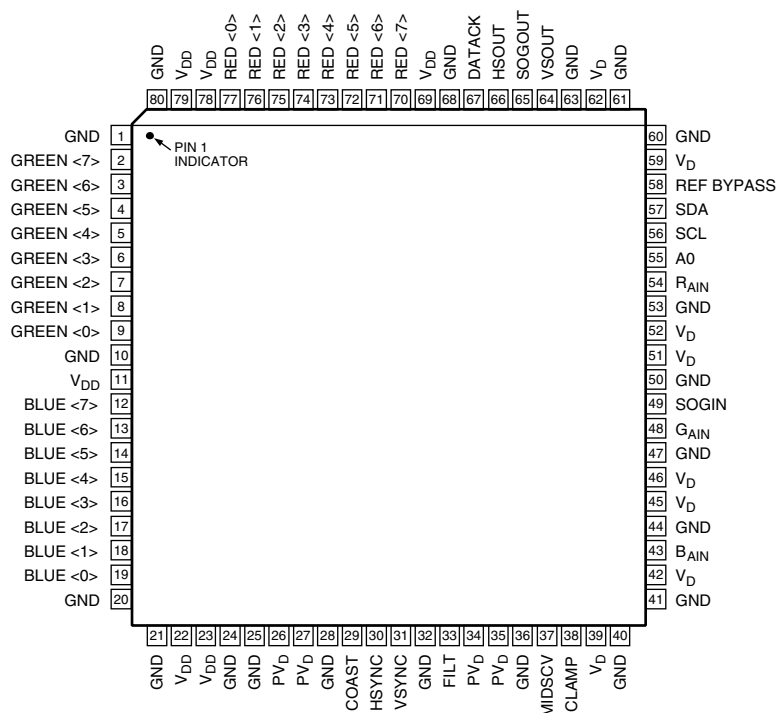
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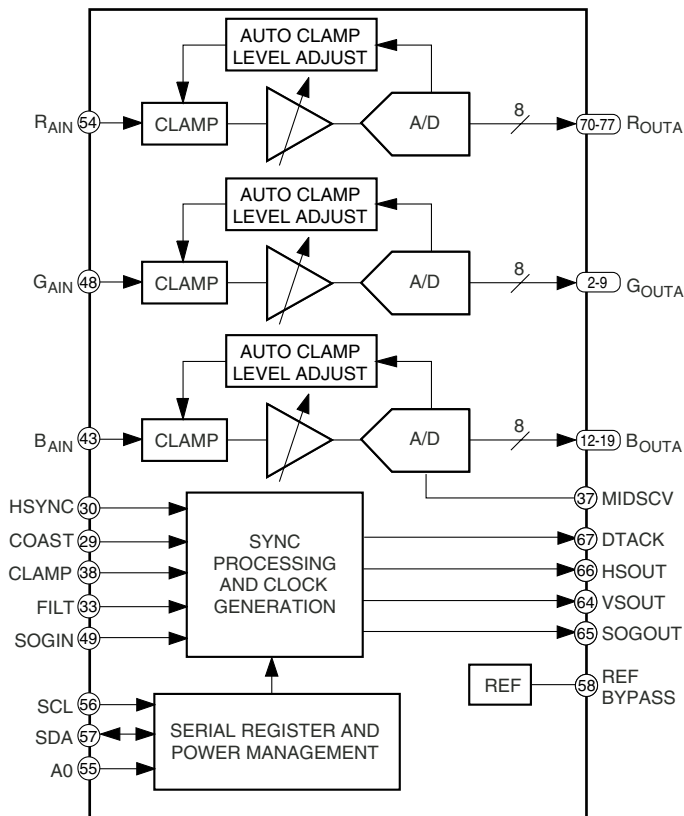
## AD9985KSTZ-110 (OBE MAIN ASSY : IC6201)

• ADC

### • Pin Arrangement (Top view)



### • Block Diagram



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## ● Pin Function

Pin Type	No.	PIN Name	Pin Function
Inputs	54	RAIN	Analog input for converter R
	48	GAIN	Analog input for converter G
	43	BAIN	Analog input for converter B
	30	HSYNC	Horizontal sync input
	31	VSYNC	Vertical sync input
	49	SOGIN	Input for sync-on green
	38	CLAMP	Clamp input (External CLAMP signal)
	29	COAST	PLL COAST signal input
Outputs	70-77	Red [7 : 0]	Outputs of converter red, bit 7 is the MSB
	2-9	Green [7 : 0]	Outputs of converter green, bit 7 is the BSB
	12-19	Blue [7 : 0]	Outputs of converter blue, bit 7 is the BSB
	67	DATAACK	Data output clock
	66	HSOUT	HSYNC output (Phase-aligned with DATAACK)
	64	VSOUT	VSYNC output (Phase-aligned with DATAACK)
	65	SOGOUT	Sync-on-green slicer output
Reference	58	REF BYPASS	Internal reference bypass
	37	MIDSCV	Internal midscale voltage bypass
	33	FILT	Connection for external filter components for internal PLL
Power Supply	39, 42, 45, 46, 51, 52, 59, 62	V <sub>D</sub>	Analog power supply
	11, 22, 23, 69, 78, 79	V <sub>DD</sub>	Output power supply
	26, 27, 34, 35	PV <sub>D</sub>	PLL power supply
	1, 10, 20, 21, 24, 25, 28, 32, 36, 40, 41, 44, 47, 50, 53, 60, 61, 63 68, 80	GND	Ground
Control	57	SDA	Serial port data I/O
	56	SCL	Serial port data clock (100 kHz maximum)
	55	A0	Serial port address input 1

E

F

## A

- ### ● Pin Arrangement (Top view)



□



A

## ● Pin Function

No.	Pin Name	I/O	Pin Function
1	DE	O	Data enable
2	HSYNC	O	Horizontal sync output control signal
3	VSYNC	O	Vertical sync output control signal
4	IOGND	–	Input / output pin ground
5	IOVCC	–	Input / output pin VCC
6	DACOVCC	–	DAC output VCC
7	DACAVCC	–	DAC analog VCC
8	DACAGND	–	DAC analog ground
9	VREF	–	–
10	RSET	–	Full scale adjust resistor
11	COMP	–	Compensation
12	DACGNDR	–	DAC red ground
13	DACVCCR	–	DAC red VDD
14	AnRPr	O	Analog video red, Pr output
15	DACGNDG	–	DAC green ground
16	DACVCCG	–	DAC green VDD
17	AnGY	O	Analog video green, Y output
18	DACGNDB	–	DAC blue ground
19	DACVCCB	–	DAC blue VDD
20	AnBPb	O	Analog video blue, Pb output
21	DACDGND	–	DAC digital ground
22	DACDVCC18	–	DAC digital VCC
23	CVCC18	–	Digital logic VCC
24	CGND	–	Digital logic ground
25	IOGND	–	Input / output pin ground
26	IOVCC	–	Input / output pin VCC
27	CSDA	I/O	Configuration I <sup>2</sup> C data
28	CSCL	I	Configuration I <sup>2</sup> C clock
29	DSDA1	I/O	DDC I <sup>2</sup> C data for port 1
30	DSCL1	I	DDC I <sup>2</sup> C clock for port 1
31	DSDA0	I/O	DDC I <sup>2</sup> C data for port 0
32	DSCL0	I	DDC I <sup>2</sup> C clock for port 0
33	R1PWR5V	I	Port 1 transmitter detect
34	R0PWR5V	I	Port 0 transmitter detect
35	DVCC18	–	ACR PLL digital VCC
36	DGND	–	ACR PLL ground
37	PVCC0	–	TMDS port 0 PLL VCC
38	AVCC	–	TMDS analog VCC
39	R0XC–	I	TMDS input clock
40	R0XC+	I	TMDS input clock
41	AGND	–	TMDS analog ground
42	AVCC	–	TMDS analog VCC
43	R0X0–	I	TMDS input data
44	R0X0+	I	TMDS input data
45	AGND	–	TMDS analog ground
46	AVCC	–	TMDS analog VCC
47	R0X1–	I	TMDS input data
48	R0X1+	I	TMDS input data
49	AGND	–	TMDS analog ground
50	AVCC	–	TMDS analog VCC



No.	Pin Name	I/O	Pin Function
51	R0X2-	I	TMDS input data
52	R0X2+	I	TMDS input data
53	AGND	-	TMDS analog ground
54	TMDSPGND	-	TMDS PLL ground
55	PVCC1	-	TMDS port 1 PLL VCC
56	RSVD_A	-	Reserved pin
57	AVCC	-	TMDS analog VCC
58	R1XC-	I	TMDS input clock
59	R1XC+	I	TMDS input clock
60	AGND	-	TMDS analog ground
61	AVCC	-	TMDS analog VCC
62	R1X0-	I	TMDS input data
63	R1X0+	I	TMDS input data
64	AGND	-	TMDS analog ground
65	AVCC	-	TMDS analog VCC
66	R1X1-	I	TMDS input data
67	R1X1+	I	TMDS input data
68	AGND	-	TMDS analog ground
69	AVCC	-	TMDS analog VCC
70	R1X2-	I	TMDS input data
71	R1X2+	I	TMDS input data
72	AGND	-	TMDS analog ground
73	DGND	-	ACR PLL ground
74	DVCC18	-	ACR PLL digital VCC
75	IOGND	-	Input / output pin ground
76	IOVCC	-	Input / output pin VCC
77	MUTEOUT	O	Mute audio output
78	SPDIF	O	S/PDIF audio output
79	CVCC18	-	Digital logic VCC
80	CGND	-	Digital logic ground
81	RSVD	O	-
82	RSVD	O	-
83	RSVD	O	-
84	SD0	O	I <sup>2</sup> S serial data output
85	WS	O	I <sup>2</sup> S word select output
86	SCK	O	I <sup>2</sup> S serial clock output
87	MCLKIN	I	Audio master clock input reference
88	MCLKOUT	O	Audio master clock output
89	IOVCC	-	Input / output pin VCC
90	IOGND	-	Input / output pin ground
91	CGND	-	Digital logic ground
92	CVCC18	-	Digital logic VCC
93	NC	-	No connection
94	AUDPVCC18	-	ACR PLL VCC
95	AUDPGND	-	ACR PLL ground
96	XTALOUT	O	Crystal clock output
97	XTALIN	I	Crystal clock input
98	XTALVCC	-	ACR PLL crystal input VCC
99	REGVCC	-	ACR PLL regulator VCC
100	NC	-	No connection

A

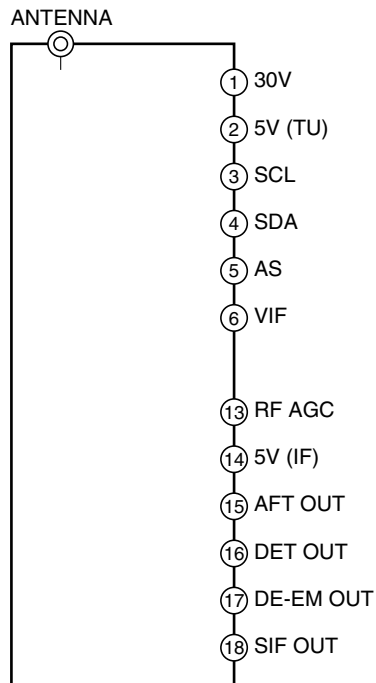
No.	Pin Name	I/O	Pin Function
101	RSVDL	I	Reserved, must be tied LOW
102	RESET#	I	Reset pin, active LOW
103	SCDT	O	Indicates active video at HDMI input port
104	INT	O	Interrupt output
105	CVCC18	–	Digital logic VCC
106	CGND	–	Digital logic ground
107	CLK48B	I/O	Data bus latch enable
108	IOGND	–	Input / output pin ground
109	IOVCC	–	Input / output pin VCC
110	Q23	O	24-bit output pixel data bus
111	Q22	O	24-bit output pixel data bus
112	Q21	O	24-bit output pixel data bus
113	Q20	O	24-bit output pixel data bus
114	CVCC18	–	Digital logic VCC
115	CGND	–	Digital logic ground
116	Q19	O	24-bit output pixel data bus
117	Q18	O	24-bit output pixel data bus
118	Q17	O	24-bit output pixel data bus
119	Q16	O	24-bit output pixel data bus
120	IOGND	–	Input / output pin ground
121	ODCK	O	Output data clock
122	IOVCC	–	Input / output pin VCC
123	Q15	O	24-bit output pixel data bus
124	Q14	O	24-bit output pixel data bus
125	Q13	O	24-bit output pixel data bus
126	Q12	O	24-bit output pixel data bus
127	CGND	–	Digital logic ground
128	CVCC18	–	Digital logic VCC
129	Q11	O	24-bit output pixel data bus
130	Q10	O	24-bit output pixel data bus
131	Q9	O	24-bit output pixel data bus
132	Q8	O	24-bit output pixel data bus
133	Q7	O	24-bit output pixel data bus
134	IOVCC	–	Input / output pin VCC
135	IOGND	–	Input / output pin ground
136	Q6	O	24-bit output pixel data bus
137	Q5	O	24-bit output pixel data bus
138	CGND	–	Digital logic ground
139	CVCC18	–	Digital logic VCC
140	Q4	O	24-bit output pixel data bus
141	Q3	O	24-bit output pixel data bus
142	Q2	O	24-bit output pixel data bus
143	Q1	O	24-bit output pixel data bus
144	Q0	O	24-bit output pixel data bus

F

## AXF1149 (OBE MAIN ASSY : U4401)

• Front End

### ● Pin Arrangement



### ● Pin Function

No.	Pin Name	Pin Function
1	30V	Power supply for 30V
2	5V (TU)	Power supply for tuner
3	SCL	Terminal for I <sup>2</sup> C bus control
4	SDA	
5	AS	
6	VIF	VIF output
13	RF AFG	RF AGC terminal
14	5V (IF)	Power supply for IF
15	AFT OUT	Analog AFT output
16	DET OUT	VIDEO output (Typical = 1.0Vp-p)
17	DE-EM OUT	Audio output
18	SIF OUT	SIF output

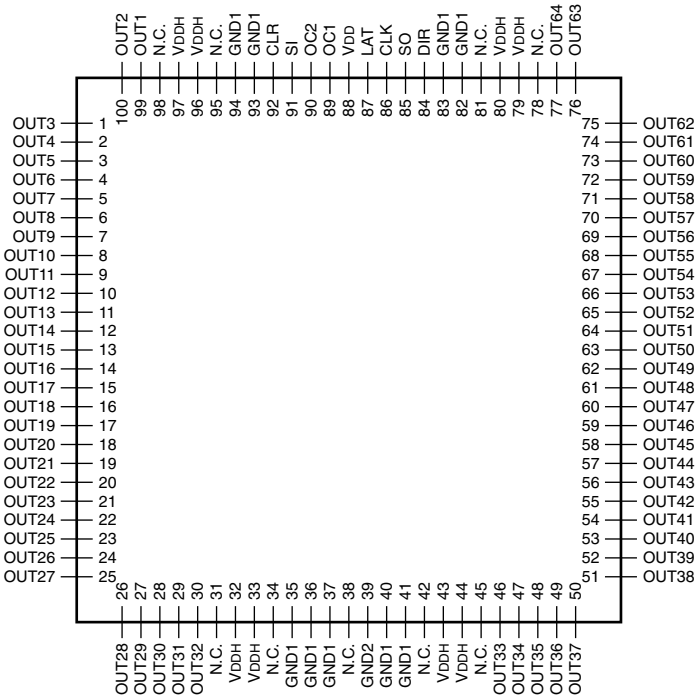
A

**■ SN755870PZT (43 SCAN A ASSY : IC2701 - IC2706)  
(43 SCAN B ASSY : IC2801 - IC2806)**

• Plasma Display Panel IC

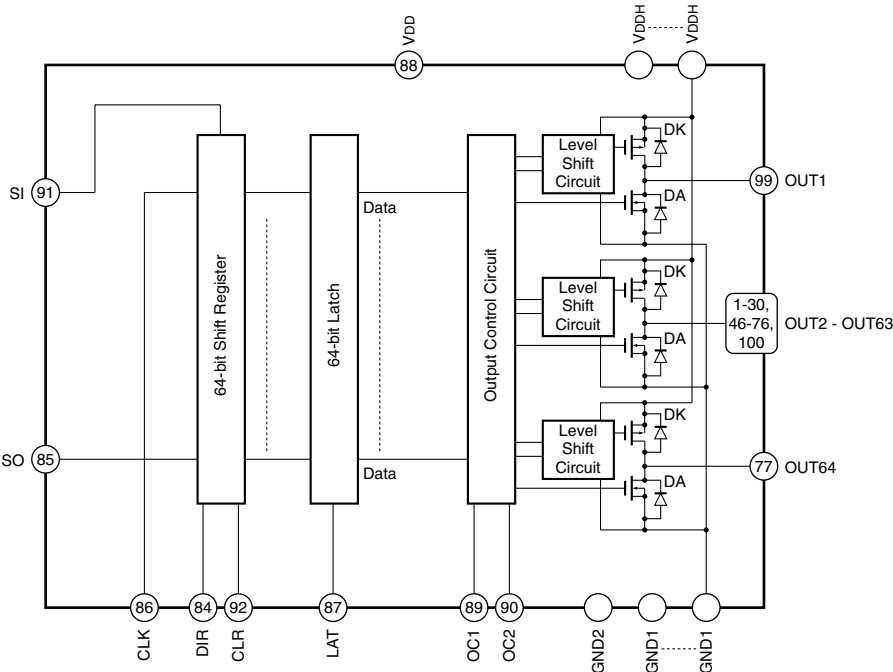
B

● Pin Arrangement (Top view)



C

● Block Diagram



E

F

# ● Pin Function

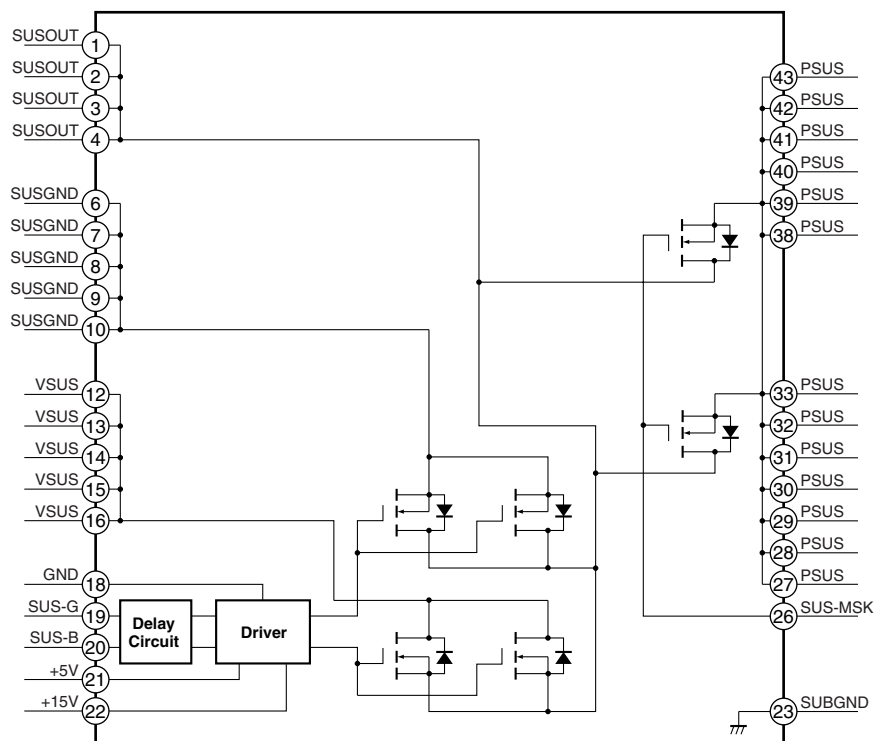
No.	Pin Name	I/O	Pin Function															
1 - 30	OUT3 - OUT32	O	High-voltage push-pull output															
31	N.C.	–	Not connected															
32 - 33	V <sub>DDH</sub>	–	High-voltage circuit supply															
34	N.C.	–	Not connected															
35 - 37	GND1	–	Ground															
38	N.C.	–	Not connected															
39	GND2	–	Ground															
40 - 41	GND1	–	Ground															
42	N.C.	–	Not connected															
43 - 44	V <sub>DDH</sub>	–	High-voltage circuit supply															
45	N.C.	–	Not connected															
46 - 77	OUT33 - OUT64	O	High-voltage push-pull output															
78	N.C.	–	Not connected															
79 - 80	V <sub>DDH</sub>	–	High-voltage circuit supply															
81	N.C.	–	Not connected															
82 - 83	GND1	–	Ground															
84	DIR	I	Setup of shift register shift direction L = Shift into reverse (SO → SI)   H = Shift forward (SI → SO)															
85	SO	I/O	Serial data input / output															
86	CLK	I	Serial clock input   Fetch SI or SO data to shift register by CLK rise edge															
87	LAT	I	LAT data input L = Transfer shift register data to output latch   H = Hold data to output latch															
88	V <sub>DD</sub>	–	Logic supply															
89	OC1	I	<div>Output control Control output according to the right truth value table</div> <table><tr><th>OC1</th><th>OC2</th><th>OUT</th></tr><tr><td>L</td><td>L</td><td>ALL Hi-Z</td></tr><tr><td>L</td><td>H</td><td>DATA</td></tr><tr><td>H</td><td>L</td><td>ALL L</td></tr><tr><td>H</td><td>H</td><td>ALL H</td></tr></table>	OC1	OC2	OUT	L	L	ALL Hi-Z	L	H	DATA	H	L	ALL L	H	H	ALL H
OC1	OC2	OUT																
L	L	ALL Hi-Z																
L	H	DATA																
H	L	ALL L																
H	H	ALL H																
90	OC2	I																
91	SI	I/O	Serial data input / output															
92	CLR	I	All output reset   CLR pin : L → Normal operation   CLR pin : H → All output High															
93 - 94	GND1	–	Ground															
95	N.C.	–	Not connected															
96 - 97	V <sub>DDH</sub>	–	High-voltage circuit supply															
98	N.C.	–	Not connected															
99 - 100	OUT1 - OUT2	O	High-voltage push-pull output															

A

## ■ AXF1143 (43 X DRIVE ASSY : IC1202)

• X Mask Module

### ● Block Diagram



B

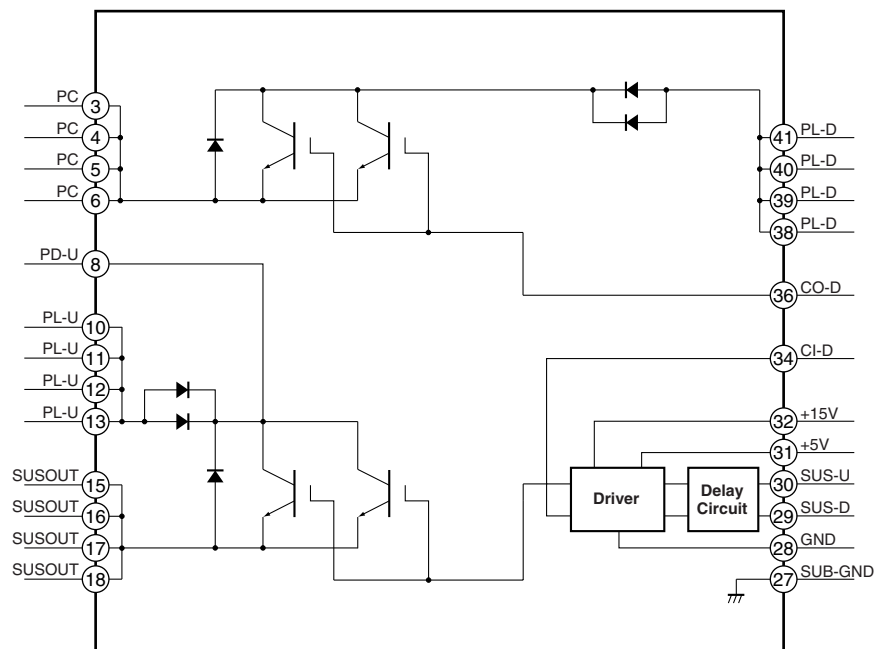
C

D

## ■ AXF1145 (43 X DRIVE ASSY : IC1101) (43 Y DRIVE ASSY : IC2101)

• DK Module

### ● Block Diagram



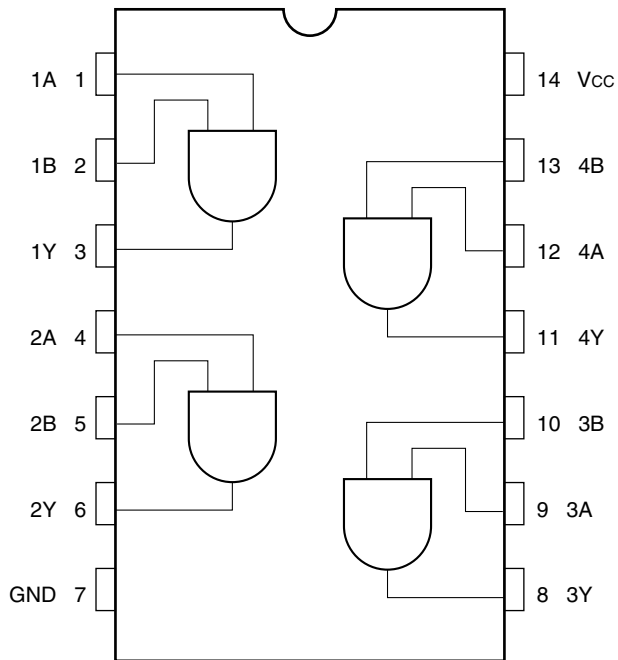
E

F

## TC74VHC08FTS1 (43 Y DRIVE ASSY : IC2003, IC2005)

• Quad 2-input AND Gate

### • Pin Arrangement (Top view) / Block Diagram



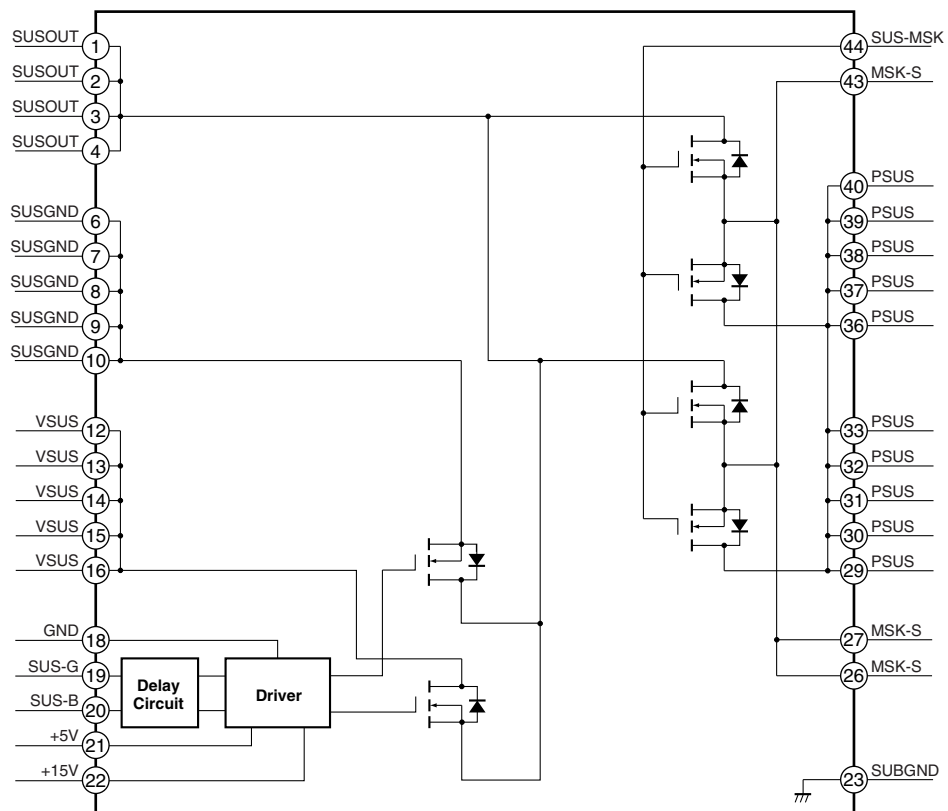
### • Truth Table

A	B	Y
L	L	L
L	H	L
H	L	L
H	H	H

## AXF1144 (43 Y DRIVE ASSY : IC2252, IC2253)

• Y Mask Module

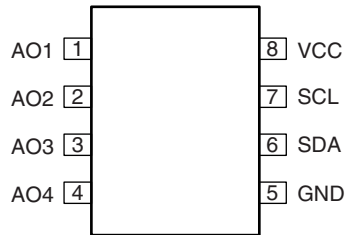
### • Block Diagram



## ■ M62334FP (OB DIGITAL ASSY : IC3157)

• 8-bit 4ch I2C Bus D-A Converter with Buffer Amplifier

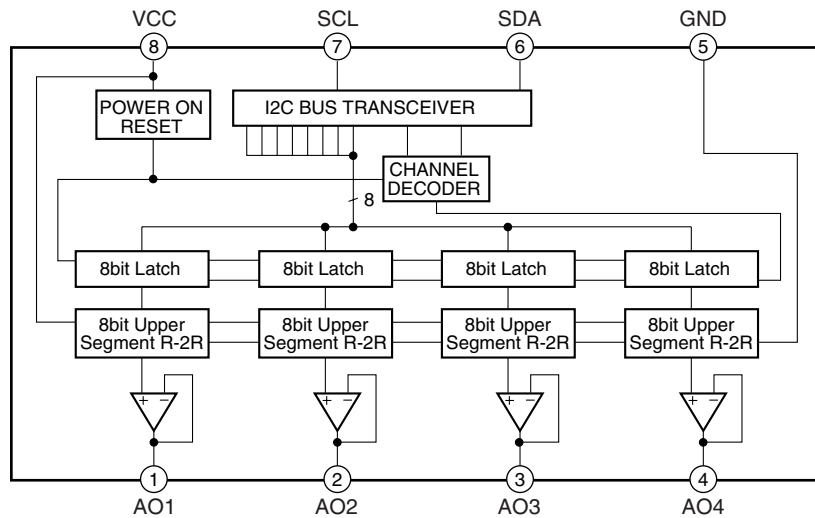
### ● Pin Arrangement (Top view)



### ● Pin Function

No.	Pin Name	Pin Function
1	AO1	8-bit resolution D-A converter output
2	AO2	
3	AO3	
4	AO4	
5	GND	Ground
6	SDA	Serial data input
7	SCL	Serial clock input
8	VCC	Power supply

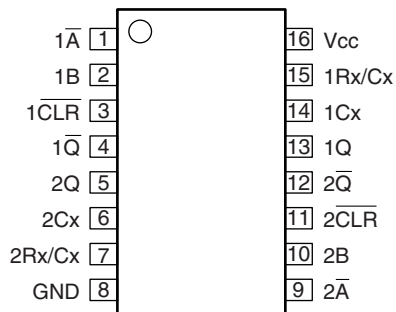
### ● Block Diagram



## ■ TC74VHC123AFTS1 (OB DIGITAL ASSY : IC3160)

• Dual Monostable Multivibrator/AFN/AFT Retriggerble

### ● Pin Arrangement (Top view)



### ● Truth Table

Inputs			Outputs		Note
$\bar{A}$	B	CLR	Q	$\bar{Q}$	
$\bar{1}$	H	H	$\bar{1}$	1	Output enable
X	L	H	L	H	Inhibit
H	X	H	L	H	Inhibit
L	$\bar{1}$	H	$\bar{1}$	1	Output enable
L	H	$\bar{1}$	$\bar{1}$	1	Output enable
X	X	L	L	H	Reset

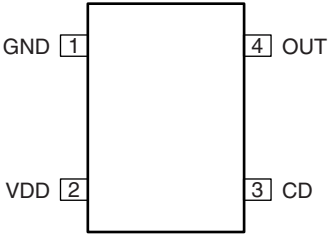
X: Don't care



■ **PST3610UR (OB DIGITAL ASSY : IC3304)**

• Reset IC

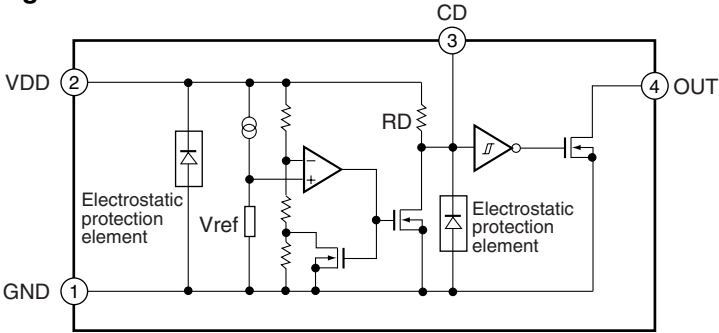
● **Pin Arrangement (Top view)**



● **Pin Function**

No.	Pin Name	Pin Function
1	GND	Ground
2	VDD	Power supply / Voltage detection
3	CD	Capacitor connect pin for delay
4	OUT	Reset signal output

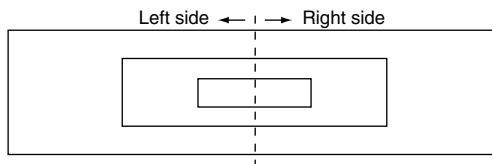
● **Block Diagram**



# **PEG122C (OB DIGITAL ASSY : IC3401)**

• LSI for PDP video processing (SEQUENCE PROCESSOR)

## **● Pin Arrangement (Top view)**



## **● Left side (Top view)**

	1	2	3	4	5	6	7	8	9	10	11	12	13	
A	BAI5	GA11	GA14	GA19	RA14	RA19	BB10	BB16	GB11	GB15	RB11	RB17	TRNSEND1	A
B	BAI4	GA10	GND33	GA18	RA13	RA18	HDI	BB15	GB10	GDN33	RB10	RB16	TRNSEND0	B
C	BAI3	BAI9	VDD33	GA17	RA12	RA17	VDI	BB14	BB19	VDD33	GB19	RB15	VDD33	C
D	BAI2	BAI8	GA13	GA16	RA11	RA16	DEI	BB13	BB18	GB14	GB18	RB14	RB19	D
E	BAI1	BAI7	GA12	GA15	RA10	RA15	DCLKI	BB12	BB17	GB13	GB17	RB13	RB18	E
F	BAI0	BAI6	PEAK	APLDT	THEATER	GND12	VDD12	BB11	VDD12	GB12	GB16	RB12	VDD12	F
G	XSCAN20	XSCAN19	XSCAN18	XSCAN17	XSCAN16	VDD12								G
H	XSCAN15	XSCAN14	XSCAN13	XSCAN12	XSCAN11	VDDTC12								H
J	XSCAN10	GND33	VDD33	XSCAN9	GNDTC12	VDD12								J
K	XSCAN8	XSCAN7	XSCAN6	XSCAN5	XSCAN4	VDDTC12								K
L	XSCAN3	XSCAN2	XSCAN1	XSCAN0	GND12	VDD12								L
M	XSUS10	XSUS9	XSUS8	XSUS7	GNDTC12	VDD12								M
N	XSUS6	GND33	VDD33	XSUS5	GND12	VDD12								N
P	XSUS4	XSUS3	XSUS2	XSUS1	XSUS0	VDDTC12								P
R	ADRS0	ADRS1	ADRS2	ADRS3	GNDTC12	VDD12								R
T	TEST_I0	GND33	VDD33	TEST_I1	TEST_I2	TEST_R								T
U	TXOUTM063	TXOUTP063	GNDLA	VDDLA	GNDLA	VDDL12								U
V	TXCLKOUTM06	TXCLKOUTP06	GNDLA	VDDLA	GNDLA	VDDLA								V
W	TXOUTM062	TXOUTP062	GNDLA	VDDLA	GNDLA	VDDLA								W
Y	TXOUTM061	TXOUTP061	GNDLA	VDDLA	GNDLA	VDDL12								Y
AA	TXOUTM060	TXOUTP060	GNDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDL12	VDDLA	VDDL12	VDDLA	VDDLA	VDDLA	AA
AB	TXOUTM073	TXOUTP073	GNDLA	VDDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	VDDBG	REFIN		AB
AC	TXCLKOUTM07	TXCLKOUTP07	GNDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	AC
AD	TXOUTM072	TXOUTP072	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	AD
AE	TXOUTM071	TXOUTP071	GNDLA	TXOUTP033	TXCLKOUTP03	TXOUTP032	TXOUTP031	TXOUTP030	TXOUTP023	TXCLKOUTP02	TXOUTP022	TXOUTP021	TXOUTP020	AE
AF	TXOUTM070	TXOUTP070	GNDLA	TXOUTM033	TXCLKOUTM03	TXOUTM032	TXOUTM031	TXOUTM030	TXOUTM023	TXCLKOUTM02	TXOUTM022	TXOUTM021	TXOUTM020	AF

GND12	GND12	GND12
GND12	GND12	GND12
GND12	GND12	GND12
GND12	GND12	GND12
GND12	GND12	GND12
GND12	GND12	GND12

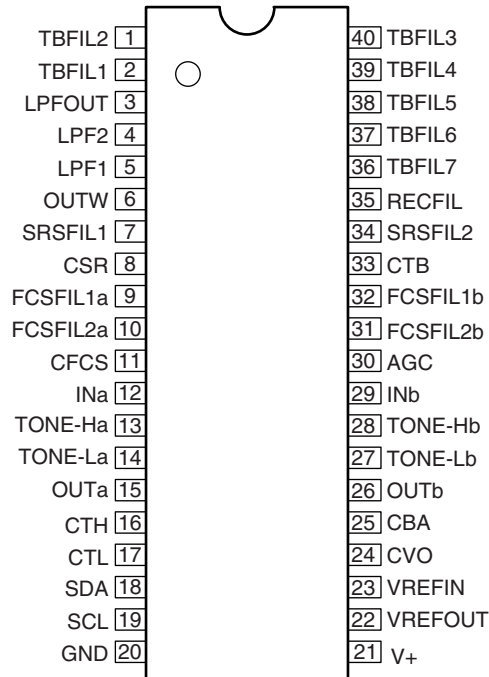
## **● Right side (Top view)**

	14	15	16	17	18	19	20	21	22	23	24	25	26	
A	CLKD	VSSPA	EXDI011	EXDI09	EXA4	EXA10	EXA2	EXA16	EXA20	CSCS_N1	CSCS_N2	CSIOSCK1	CSIORXD	A
B	CSRDI_N	VCCPA	EXDI04	GND33	EXA3	EXA9	EXA1	EXA15	EXA19	CSCS_N0	GND33	TCRAM_MONITOR0	TCRAM_MONITOR1	B
C	CLKS	CLK_MONI	EXDI012	VDD33	EXDI00	EXA8	CSWR_N	EXA14	EXA18	UARTRXD	VDD33	TCRAM_MONITOR2	CSIORQ	C
D	VSSPB	EXDI014	EXDI05	EXDI02	EXDI08	EXA7	EXA0	EXA13	EXA17	UARTTXD	CS10TXD	RESETX	SDIUTAG	D
E	VCCPB	EXDI07	EXDI013	EXDI010	EXDI01	EXA6	EXA11	EXA12	CSEXWAIT_N	SDITRST_N	SDITCK	SDIDBI_N	SDITMS	E
F	LPFMONI	EXDI015	EXDI06	EXDI03	VDD12	EXA5	VDD12	GND12	SDITDO	SDITDI	GPI000	GPI001	GPI002	F
G								VDD12	GPI003	GPI004	GPI005	GPI006	GPI007	G
H								VDDTC12	YSCAN20	YSCAN19	YSCAN18	YSCAN17	YSCAN16	H
J								VDD12	GNDTC12	YSCAN15	VDD33	GND33	YSCAN14	J
K								VDDTC12	YSCAN13	YSCAN12	YSCAN11	YSCAN10	YSCAN9	K
L								VDD12	GND12	YSCAN8	YSCAN7	YSCAN6	YSCAN5	L
M								VDD12	GNDTC12	YSCAN4	YSCAN3	YSCAN2	YSCAN1	M
N								VDD12	GND12	YSCAN0	VDD33	GND33	VSUS10	N
P								VDDTC12	YSUS9	YSUS8	YSUS7	YSUS6	YSUS5	P
R								VDD12	GNDTC12	YSUS4	YSUS3	YSUS2	YSUS1	R
T								YSUS0	RSV1	RSV0	VDD33	GND33	AFE_PS_N	T
U								VDDL12	GNDLA	VDDLA	GNDLA	TXOUTP050	TXOUTM050	U
V								VDDLA	GNDLA	VDDLA	GNDLA	TXOUTP051	TXOUTM051	V
W								VDDLA	GNDLA	VDDLA	GNDLA	TXOUTP052	TXOUTM052	W
Y								VDDL12	GNDLA	VDDLA	GNDLA	TXCLKOUTP05	TXCLKOUTM05	Y
AA	VDDLA	VDDLA	VDDL12	VDDLA	VDDLA	VDDL12	VDDLA	VDDLA	VDDLA	VDDLA	GNDLA	TXOUTP053	TXOUTM053	AA
AB	VREF12	GNDBG	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	VDDLA	GNDLA	TXOUTP040	TXOUTM040	AB
AC	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	GNDLA	TXOUTP041	TXOUTM041	AC
AD	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	TXOUTP042	TXOUTM042	AD
AE	TXOUTP013	TXCLKOUTP01	TXOUTP012	TXOUTP011	TXOUTP010	TXOUTP003	TXCLKOUTP00	TXOUTP002	TXOUTP001	TXOUTP000	GNDLA	TXCLKOUTP04	TXCLKOUTM04	AE
AF	TXOUTM013	TXCLKOUTM01	TXOUTM012	TXOUTM011	TXOUTM010	TXOUTM003	TXCLKOUTM00	TXOUTM002	TXOUTM001	TXOUTM000	GNDLA	TXOUTP043	TXOUTM043	AF

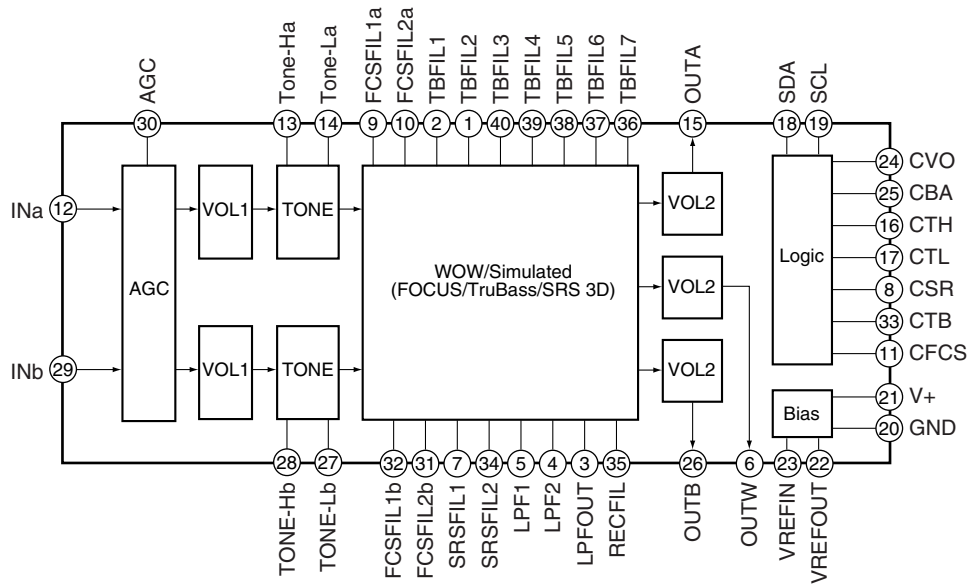
## ■ NJW1183GK1 (AUDIO ASSY : IC3753)

• FOCUS & SRS IC

### ● Pin Arrangement (Top view)



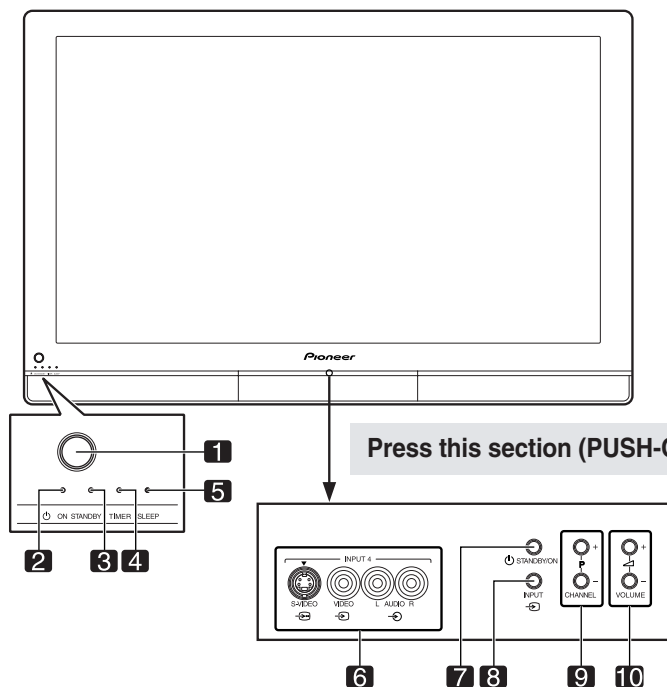
### ● Block Diagram



# 8. PANEL FACILITIES

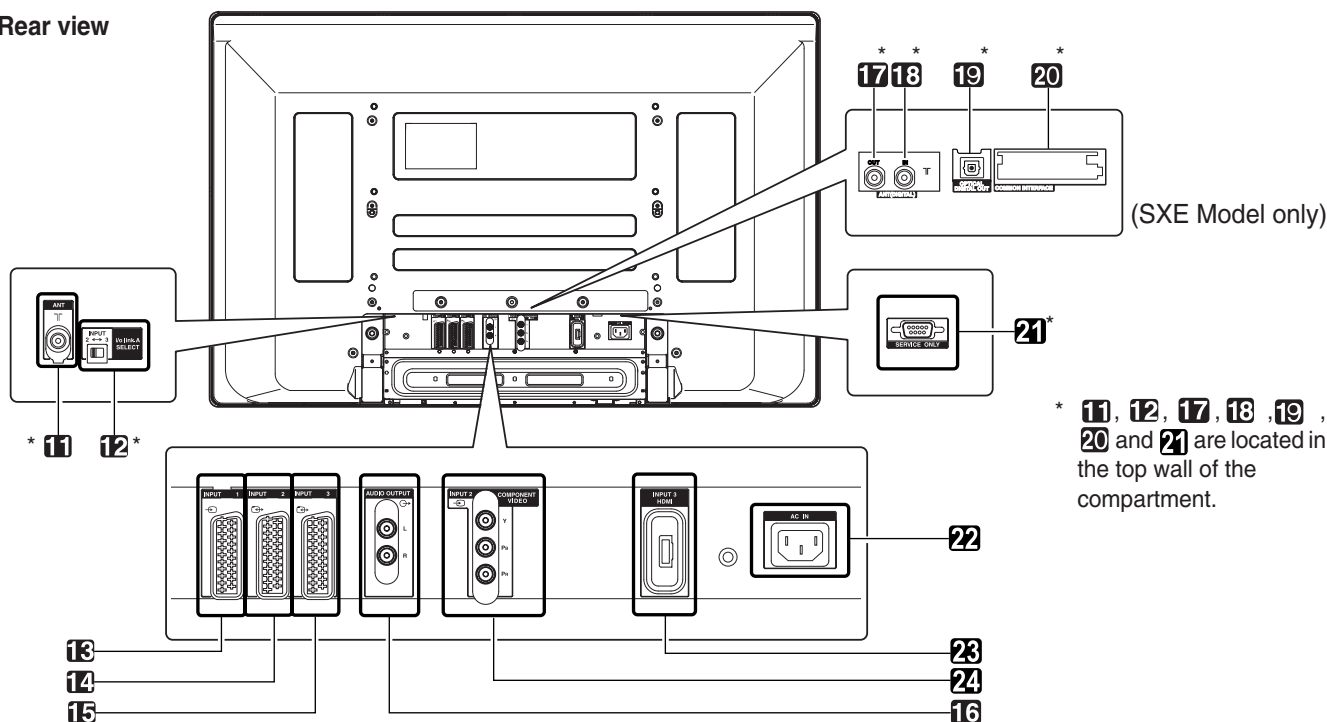
## A Plasma Display

Front view



- |                                       |                     |                       |
|---------------------------------------|---------------------|-----------------------|
| 1 POWER button                        | 5 SLEEP indicator   | 8 INPUT button        |
| 2 POWER ON indicator                  | 6 INPUT 4 terminals | 9 CHANNEL +/- buttons |
| 3 STANDBY indicator                   | 7 STANDBY/ON button | 10 VOLUME +/- buttons |
| 4 TIMER(SXE) / PIC OFF(RXE) indicator |                     |                       |

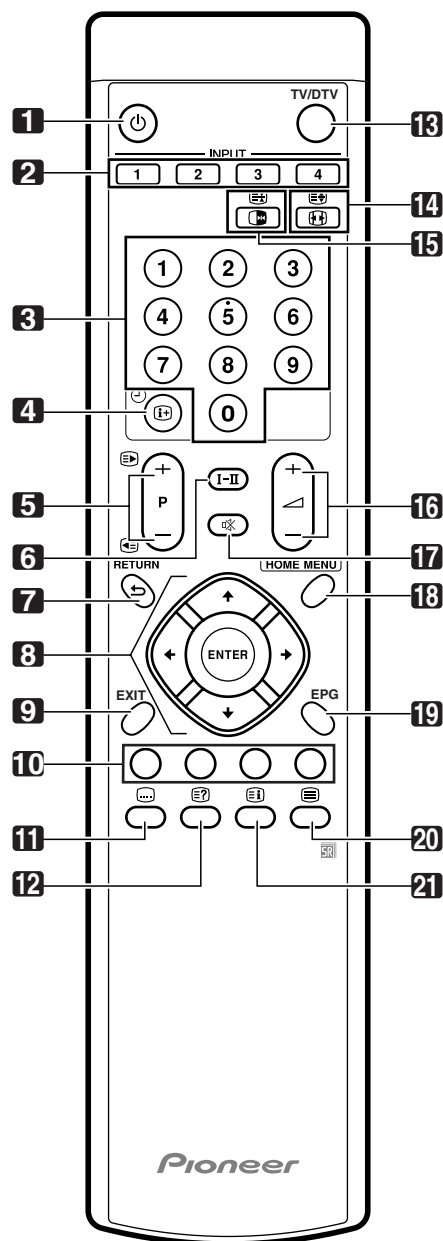
Rear view



- |   |  |
|---|--|
| 11 ANT (Antenna) input terminal           | 18 ANT IN terminal (Antenna in for DTV)          |
| 12 i/o link.A SELECT switch               | • Power can be supplied through this terminal.   |
| 13 INPUT 1 terminal (SCART)               | 19 DIGITAL OUT terminal (OPTICAL)                |
| 14 INPUT 2 terminal (SCART)               | 20 COMMON INTERFACE slot                         |
| 15 INPUT 3 terminal (SCART)               | • For a CA Module with a smart card              |
| 16 AUDIO OUTPUT terminals (L - R)         | 21 RS232C terminal (used for factory setup)      |
| 17 ANT OUT terminal (Antenna through out) | 22 AC IN terminal                                |
|   | 23 HDMI terminal (INPUT 3)                       |
|   | 24 INPUT 2 terminals (COMPONENT VIDEO:Y, Pb, Pr) |

\* 11, 12, 17, 18, 19, 20 and 21 are located in the top wall of the compartment.

## Remote control unit



### NOTE

- When using the remote control unit, point it at the Plasma Display.

- 1** Turns on the power to the Plasma Display or places it into the standby mode.
- 2** **INPUT**  
Selects an input source of the Plasma Display. (INPUT 1, INPUT 2, INPUT 3, INPUT 4)
- 3** **0 – 9**  
TV/External input mode: Selects a channel.  
TELETEXT mode: Selects a page.
- 4** TV/External input mode: Displays the channel information.  
DTV input mode: Displays the banner information.
- 5** **P +/P –**  
TV/External input mode: Selects a channel.  
 TELETEXT mode: Selects a page.
- 6** **I-II**  
Sets the sound multiplex mode.
- 7** **RETURN**  
Restores the previous menu screen.
- 8** Selects a desired item on the setting screen.  
**ENTER**  
Executes a command.
- 9** **EXIT (SXE only)**  
Returns to the normal screen in one step.
- 10** **Colour (RED/GREEN/YELLOW/BLUE)**  
TELETEXT mode: Selects a page.
- 11** TV/External input mode: Jumps to the Teletext subtitle page.  
DTV input mode: Turns subtitle on and off.
- 12** Displays hidden characters.
- 13** **TV/DTV (SXE only)**  
Switches between the TV and DTV input modes.
- 14** TV/External input mode: Selects the screen size.  
 TELETEXT mode: Switches Teletext images. (full/upper half/lower half)
- 15** TV/External input mode: Freezes a frame from a moving image. Press again to cancel the function.  
 TELETEXT mode: Stops updating Teletext pages. Press again to release the hold mode.
- 16** Sets the volume.
- 17** Mutes the sound.
- 18** **HOM E MEN U**  
TV/External Input mode: Displays the Menu screen.
- 19** **EPG (SXE only)**  
Displays the Electronic Programme Guide.
- 20** Selects the TELETEXT mode.  
(all TV image, all TEXT image, TV/TEXT image)
- 21** TELETEXT mode: Displays an Index page for the CEEFAX/FLOF format. Displays a TOP Over View page for the TOP format.

A ■ Jigs list

Jig No.	Name	Remarks
GGD1170	40P Extension FFC	Diagnosis of OB DIGITAL Assy at power on state

B



Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

C

D

E

F